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Commander and Staff Organization and Operations

1. Change 2 to FM 6-0, 5 May 2014, updates discussion of evaluation criteria, corrects errors in how to weight evaluation criteria, and makes administrative changes.
2. A left-pointing triangle (◄) marks new content material.
3. FM 6-0, 5 May 2014, is changed as follows:

Remove Old Pages	Insert New Pages
pages 9-1 through 9-46	pages 9-1 through 9-46
pages References-1 through References-4	pages References-1 through References-4

4. File this transmittal sheet in front of the publication for reference purposes.

FM 6-0, C2
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By Order of the Secretary of the Army:

MARK A. MILLEY
General, United States Army
Chief of Staff

Official:

GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
1610404

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Chapter 9
The Military Decisionmaking Process

The military decisionmaking process is one of the Army's three planning methodologies. Before beginning an iteration of the military decisionmaking process, readers should review chapter 2 of ADRP 5-0 to understand the fundamentals of planning. This chapter defines and describes the characteristics of the military decisionmaking process. Next, it provides a detailed discussion of each step of the military decisionmaking process. The chapter concludes by providing guidance for conducting the military decisionmaking process in a time-constrained environment. Effectively conducting the military decisionmaking process requires leaders who understand the fundamentals of planning.

CHARACTERISTICS OF THE MILITARY DECISIONMAKING PROCESS

9-1. The *military decisionmaking process* is an iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order (ADP 5-0). The military decisionmaking process (MDMP) helps leaders apply thoroughness, clarity, sound judgment, logic, and professional knowledge to understand situations, develop options to solve problems, and reach decisions. This process helps commanders, staffs, and others think critically and creatively while planning.

9-2. The MDMP facilitates collaborative planning. The higher headquarters solicits input and continuously shares information concerning future operations through planning meetings, warning orders, and other means. It shares information with subordinate and adjacent units, supporting and supported units, and unified action partners. Commanders encourage active collaboration among all organizations affected by pending operations to build a shared understanding of the situation, participate in course of action development and decisionmaking, and resolve conflicts before publishing the plan or order.

9-3. During planning, assessment focuses on developing an understanding of the current situation and determining what to assess and how to assess progress using measures of effectiveness and measures of performance. Developing the unit's assessment plan occurs during the MDMP—not after developing the plan or order. (See chapter 15 for details on assessment plans.)

9-4. The MDMP also drives preparation. Since time is a factor in all operations, commanders and staffs conduct a time analysis early in the planning process. This analysis helps them determine when to begin certain actions to ensure forces are ready and in position before execution. This may require the commander to direct subordinates to start necessary movements, conduct task organization changes, begin information collection, and execute other preparation activities before completing the plan. As the commander and staff conduct the MDMP, they direct preparation tasks in a series of warning orders (WARNORDs).

9-5. Depending on the situation's complexity, commanders can initiate the Army design methodology before or in parallel with the MDMP. If the problem is hard to identify or the operation's end state is unclear, commanders may initiate Army design methodology before engaging in detailed planning. Army design methodology can assist the commander and staff in understanding the operational environment, framing the problem, and considering an operational approach to solve or manage the problem. The understanding and products resulting from Army design methodology guide more detailed planning during the MDMP. When used in parallel, the commander may direct some staff members to conduct mission analysis while engaging others in Army design methodology activities prior to course of action development. Results of both mission analysis and Army design methodology inform commanders in

development of their commander's intent and planning guidance. In time-constrained conditions, or when the problem is not complex, commanders may conduct the MDMP without incorporating formal Army design methodology efforts. During execution, the commander can use Army design methodology to help refine understanding and visualization as well as assessing and adjusting the plan as required.

THE SEVEN STEPS OF THE MILITARY DECISIONMAKING PROCESS

9-6. The MDMP consists of seven steps, as shown in figure 9-1. Each step of the MDMP has various inputs, a step to conduct, and outputs. Each step also has a series of processes that commanders and staffs conduct to produce the outputs. The outputs lead to an increased understanding of the situation, facilitating the next step of the MDMP. Commanders and staffs generally perform these steps sequentially; however, they may revisit several steps in an iterative fashion as they learn more about the situation before producing the plan or order.

9-7. Commanders initiate the MDMP upon receipt of, or in anticipation of, a mission. Commanders and staffs often begin planning in the absence of a complete and approved higher headquarters' operation plan (OPLAN) or operation order (OPORD). In these instances, the headquarters begins a new planning effort based on a WARNORD and other directives, such as a planning order or an alert order from its higher headquarters. This requires active collaboration with the higher headquarters and parallel planning among echelons as the plan or order is developed.

THE ROLE OF COMMANDERS AND STAFFS IN THE MILITARY DECISIONMAKING PROCESS

9-8. The commander is the most important participant in the MDMP. More than simply decisionmakers in this process, commanders use their experience, knowledge, and judgment to guide staff planning efforts. While unable to devote all their time to the MDMP, commanders follow the status of the planning effort, participate during critical periods of the process, and make decisions based on the detailed work of the staff. During the MDMP, commanders focus their activities on understanding, visualizing, and describing.

9-9. The MDMP stipulates several formal meetings and briefings between the commander and staff to discuss, assess, and approve or disapprove planning efforts as they progress. However, experience has shown that optimal planning results when the commander meets informally at frequent intervals with the staff throughout the MDMP. Such informal interaction between the commander and staff can improve the staff's understanding of the situation and ensure their planning efforts adequately reflect the commander's visualization of the operation.

9-10. The chief of staff (COS) (executive officer [XO]) is a key participant in the MDMP. The COS (XO) manages and coordinates the staff's work and provides quality control during the MDMP. To effectively supervise the entire process, this officer has to clearly understand the commander's intent and guidance. The COS (XO) provides timelines to the staff, establishes briefing times and locations, and provides any instructions necessary to complete the plan.

9-11. The staff's effort during the MDMP focuses on helping the commander understand the situation, make decisions, and synchronize those decisions into a fully developed plan or order. Staff activities during planning initially focus on mission analysis. The products the staff develops during mission analysis help commanders understand the situation and develop the commander's visualization. During course of action (COA) development and COA comparison, the staff provides recommendations to support the commander in selecting a COA. After the commander makes a decision, the staff prepares the plan or order that reflects the commander's intent, coordinating all necessary details. (See figure 9-1.)

Key inputs	Steps	Key outputs
• Higher headquarters' plan or order or a new mission anticipated by the commander	Step 1: **Receipt of Mission**	• Commander's initial guidance • Initial allocation of time
	Warning order	
• Commander's initial guidance • Higher headquarters' plan or order • Higher headquarters' knowledge and intelligence products • Knowledge products from other organizations • Army design methodology products	Step 2: **Mission Analysis**	• Problem statement • Mission statement • Initial commander's intent • Initial planning guidance • Initial CCIRs and EEFIs • Updated IPB and running estimates • Assumptions • Evaluation criteria for COAs
	Warning order	
• Mission statement • Initial commander's intent, planning guidance, CCIRs, and EEFIs • Updated IPB and running estimates • Assumptions • Evaluation criteria for COAs	Step 3: **Course of Action (COA) Development**	• COA statements and sketches - Tentative task organization - Broad concept of operations • Revised planning guidance • Updated assumptions
• Updated running estimates • Revised planning guidance • COA statements and sketches • Updated assumptions	Step 4: **COA Analysis (War Game)**	• Refined COAs • Potential decision points • War-game results • Initial assessment measures • Updated assumptions
• Updated running estimates • Refined COAs • Evaluation criteria • War-game results • Updated assumptions	Step 5: **COA Comparison**	• Evaluated COAs • Recommended COAs • Updated running estimates • Updated assumptions
• Updated running estimates • Evaluated COAs • Recommended COAs • Updated assumptions	Step 6: **COA Approval**	• Commander approved COA and any modifications • Refined commander's intent, CCIRs, and EEFIs • Updated assumptions
	Warning order	
• Commander approved COA and any modifications • Refined commander's intent, CCIRs, and EEFIs • Updated assumptions	Step 7: **Orders Production, Dissemination, and Transition**	• Approved operation plan or order • Subordinates understand the plan or order

CCIR commander's critical information requirement
COA course of action
EEFI essential element of friendly information
IPB intelligence preparation of the battlefield

Figure 9-1. The seven steps of the military decisionmaking process

MODIFYING THE MILITARY DECISIONMAKING PROCESS

9-12. The MDMP can be as detailed as time, resources, experience, and the situation permit. Performing all steps of the MDMP is detailed, deliberate, and time-consuming. Commanders use the full MDMP when they have enough planning time and staff support to thoroughly examine two or more COAs and develop a fully synchronized plan or order. This typically occurs when planning for an entirely new mission.

9-13. Commanders may alter the steps of the MDMP to fit time-constrained circumstances and produce a satisfactory plan. In time-constrained conditions, commanders assess the situation, update the commander's visualization, and direct the staff to perform the MDMP activities that support the required decisions. In extremely compressed situations, commanders rely on more intuitive decisionmaking techniques, such as the rapid decisionmaking and synchronization process. (See paragraphs 9-205 through 9-210 for information on planning in a time-constrained environment.)

STEPS OF THE MILITARY DECISIONMAKING PROCESS

9-14. The remainder of this chapter describes the methods for conducting each step of the MDMP. It describes the key inputs and expected key outputs for each step. It also describes how the staff integrates intelligence preparation of the battlefield (IPB), targeting, risk management, and information collection throughout the MDMP.

STEP 1–RECEIPT OF MISSION

9-15. Commanders initiate the MDMP upon receipt or in anticipation of a mission. This step alerts all participants of the pending planning requirements, enabling them to determine the amount of time available for planning and preparation and decide on a planning approach, including guidance on using Army design methodology and how to abbreviate the MDMP, if required. When commanders identify a new mission, commanders and staffs perform the actions and produce the expected key outputs. (See figure 9-2.)

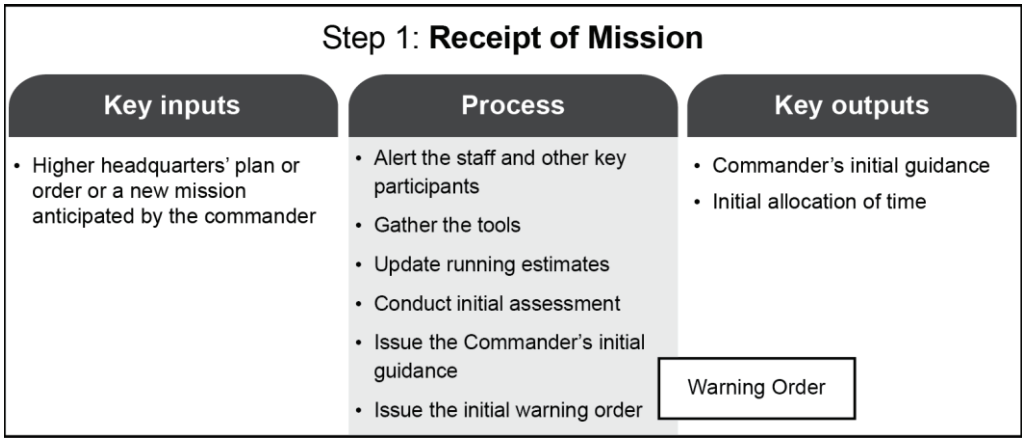

Figure 9-2. Step 1–receipt of the mission

Alert the Staff and Other Key Participants

9-16. As soon as a unit receives a new mission (or when the commander directs), the current operations integration cell alerts the staff of the pending planning requirement. Unit standard operating procedures (SOPs) should identify members of the planning staff who participate in mission analysis. In addition, the current operations integration cell also notifies other military, civilian, and host-nation organizations of pending planning events as required.

Gather the Tools

9-17. Once notified of the new planning requirement, the staff prepares for mission analysis by gathering the needed tools. These tools include, but are not limited to—

- Appropriate publications, including ADRP 1-02.
- All documents related to the mission and area of operations, including the higher headquarters' OPLAN and OPORD, maps and terrain products, and operational graphics.
- Higher headquarters' and other organizations' intelligence and assessment products.
- Estimates and products of other military and civilian agencies and organizations.
- Both their own and the higher headquarters' SOPs.
- Current running estimates.
- Any Army design methodology products.

9-18. The gathering of knowledge products continues throughout the MDMP. Staff officers carefully review the reference sections (located before paragraph **1. Situation**) of the higher headquarters' OPLANs and OPORDs to identify documents (such as theater policies and memoranda) related to the upcoming operation. If the MDMP occurs while in the process of replacing another unit, the staff begins collecting relevant documents—such as the current OPORD, branch plans, current assessments, operations and intelligence summaries, and SOPs—from that unit.

Update Running Estimates

9-19. While gathering the necessary tools for planning, each staff section begins updating its running estimate—especially the status of friendly units and resources and key civil considerations that affect each functional area. Running estimates not only compile critical facts and assumptions from the perspective of each staff section, but also include information from other staff sections and other military and civilian organizations. While listed at the beginning of the MDMP, this task of developing and updating running estimates continues throughout the MDMP and the operations process. (See chapter 8 for more information on running estimates.)

Conduct Initial Assessment

9-20. During receipt of mission, the commander and staff conduct an initial assessment of time and resources available to plan, prepare, and begin execution of an operation. This initial assessment helps commanders determine—

- The time needed to plan and prepare for the mission for both headquarters and subordinate units.
- Guidance on conducting the Army design methodology and abbreviating the MDMP, if required.
- Which outside agencies and organizations to contact and incorporate into the planning process.
- The staff's experience, cohesiveness, and level of rest or stress.

9-21. This assessment primarily identifies an initial allocation of available time. The commander and staff balance the desire for detailed planning against the need for immediate action. The commander provides guidance to subordinate units as early as possible to allow subordinates the maximum time for their own planning and preparation of operations. As a rule, commanders allocate a minimum of two-thirds of available time for subordinate units to conduct their planning and preparation. This leaves one-third of the time for commanders and their staffs to do their planning. They use the other two-thirds for their own preparation. Time, more than any other factor, determines the detail to which the commander and staff can plan.

9-22. Based on the commander's initial allocation of time, the COS (XO) develops a staff planning timeline that outlines how long the headquarters can spend on each step of the MDMP. The staff planning timeline indicates what products are due, who is responsible for them, and who receives them. It includes times and locations for meetings and briefings. It serves as a benchmark for the commander and staff throughout the MDMP.

Issue the Commander's Initial Guidance

9-23. Once time is allocated, the commander determines whether to initiate Army design methodology, perform Army design methodology in parallel with the MDMP, or proceed directly into the MDMP without the benefits of formal Army design methodology activities. In time-sensitive situations where commanders decide to proceed directly into the MDMP, they may also issue guidance on how to abbreviate the process. Having determined the time available together with the scope and scale of the planning effort, commanders issue initial planning guidance. Although brief, the initial guidance includes, but is not limited to—

- Initial time allocations.
- A decision to initiate Army design methodology or go straight into the MDMP.
- How to abbreviate the MDMP, if required.
- Necessary coordination to exchange liaison officers.
- Authorized movements and initiation of information collection.
- Collaborative planning times and locations.
- Initial information requirements.
- Additional staff tasks.

Issue the Initial Warning Order

9-24. The last task in receipt of mission is to issue a WARNORD to subordinate and supporting units. This order includes at a minimum the type of operation, the general location of the operation, the initial timeline, and any movement or information collection to initiate.

STEP 2–MISSION ANALYSIS

9-25. The MDMP continues with an assessment of the situation called mission analysis. Commanders (supported by their staffs and informed by subordinate and adjacent commanders and by other partners) gather, analyze, and synthesize information to orient themselves on the current conditions of the operational environment. The commander and staff conduct mission analysis to better understand the situation and problem, and identify *what* the command must accomplish, *when* and *where* it must be done, and most importantly *why*—the purpose of the operation.

9-26. Since no amount of subsequent planning can solve an insufficiently understood problem, mission analysis is the most important step in the MDMP. This understanding of the situation and the problem allows commanders to visualize and describe how the operation may unfold in their initial commander's intent and planning guidance. During mission analysis, the commander and staff perform the process actions and produce the outputs shown in figure 9-3.

9-27. Commanders and staffs also begin the development of evaluation criteria during this step. These evaluation criteria are continually developed and refined throughout the MDMP and become a key input during Step 5—Course of Action Comparison.

Analyze the Higher Headquarters' Plan or Order

9-28. Commanders and staffs thoroughly analyze the higher headquarters' plan or order. They determine how their unit—by task and purpose—contributes to the mission, commander's intent, and concept of operations of the higher headquarters. The commander and staff seek to completely understand—

- The higher headquarters'—
  - Commander's intent.
  - Mission.
  - Concept of operations.
  - Available assets.
  - Timeline.

- The missions of adjacent, supporting, and supported units and their relationships to the higher headquarters' plan.
- The missions or goals of unified action partners that work in the operational areas.
- Their assigned area of operations.

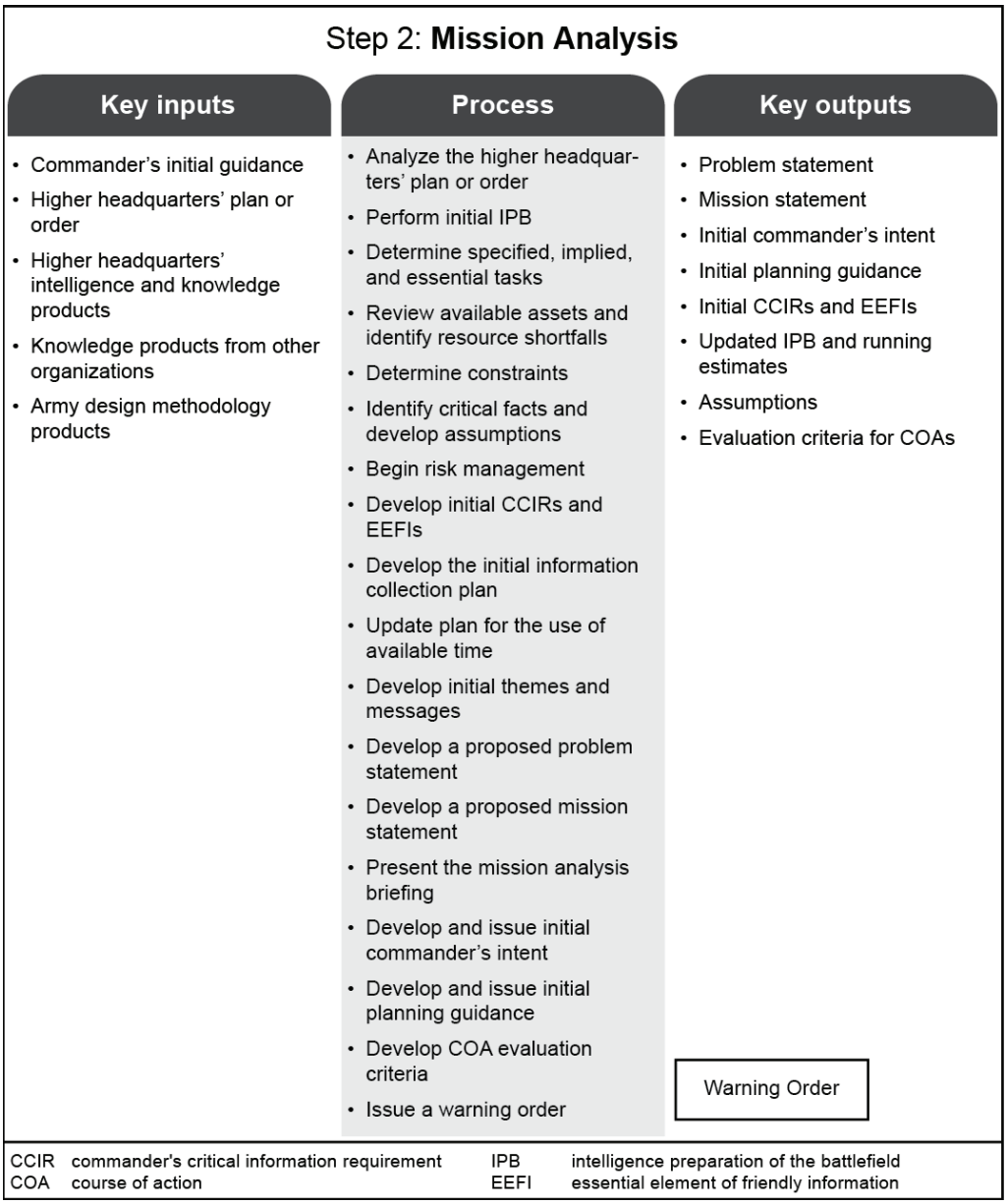

Figure 9-3. Step 2–mission analysis

9-29. If the commander misinterprets the higher headquarters' plan, time is wasted. Additionally, when analyzing the higher order, the commander and staff may identify difficulties and contradictions in the higher order. Therefore, if confused by the higher headquarters' order or guidance, commanders must seek immediate clarification. Liaison officers familiar with the higher headquarters' plan can help clarify issues. Collaborative planning with the higher headquarters also facilitates this task. Staffs use requests for information to clarify or obtain additional information from the higher headquarters.

Perform Initial Intelligence Preparation of the Battlefield

9-30. IPB is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations. The IPB process identifies critical gaps in the commander's knowledge of an operational environment. As a part of the initial planning guidance, commanders use these gaps as a guide to establish their initial intelligence requirements. IPB products enable the commander to assess facts about the operational environment and make assumptions about how friendly and threat forces will interact in the operational environment. The description of the operational environment's effects identifies constraints on potential friendly COAs. It also identifies key aspects of the operational environment, such as avenues of approach, engagement areas, and landing zones, which the staff integrates into potential friendly COAs and their running estimates. For mission analysis, the intelligence staff, along with the other staff elements, will use IPB to develop detailed threat COA models, which depict a COA available to the threat. The threat COA models provide a basis for formulating friendly COAs and completing the intelligence estimate.

9-31. The intelligence staff, in collaboration with other staffs, develops other IPB products during mission analysis. That collaboration should result in the drafting of initial priority intelligence requirements (PIRs), the production of a complete modified combined obstacles overlay, a list of high value targets, and unrefined event templates and matrices. IPB should provide an understanding of the threat's center of gravity, which then can be exploited by friendly forces.

Determine Specified, Implied, and Essential Tasks

9-32. The staff analyzes the higher headquarters' order and the higher commander's guidance to determine their specified and implied tasks. In the context of operations, a task is a clearly defined and measurable activity accomplished by Soldiers, units, and organizations that may support or be supported by other tasks. The "what" of a mission statement is always a task. From the list of specified and implied tasks, the staff determines essential tasks for inclusion in the recommended mission statement.

9-33. **A *specified task* is a task specifically assigned to a unit by its higher headquarters**. Paragraphs 2 and 3 of the higher headquarters' order or plan state specified tasks. Some tasks may be in paragraphs 4 and 5. Specified tasks may be listed in annexes and overlays. They may also be assigned verbally during collaborative planning sessions or in directives from the higher commander.

9-34. **An *implied task* is a task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order.** Implied tasks are derived from a detailed analysis of the higher headquarters' order, the enemy situation, the terrain, and civil considerations. Additionally, analysis of doctrinal requirements for each specified task might disclose implied tasks.

9-35. When analyzing the higher order for specified and implied tasks, the staff also identifies any be-prepared or on-order missions. **A *be-prepared mission* is a mission assigned to a unit that might be executed.** Generally a contingency mission, commanders execute it because something planned has or has not been successful. In planning priorities, commanders plan a be-prepared mission after any on-order mission. **An *on-order mission* is a mission to be executed at an unspecified time.** A unit with an on-order mission is a committed force. Commanders envision task execution in the concept of operations; however, they may not know the exact time or place of execution. Subordinate commanders develop plans and orders and allocate resources, task-organize, and position forces for execution.

9-36. Once staff members have identified specified and implied tasks, they ensure they understand each task's requirements and purpose. The staff then identifies essential tasks. **An *essential task* is a specified or implied task that must be executed to accomplish the mission**. Essential tasks are always included in the unit's mission statement.

Review Available Assets and Identify Resource Shortfalls

9-37. The commander and staff examine additions to and deletions from the current task organization, command and support relationships, and status (current capabilities and limitations) of all units. This analysis also includes capabilities of civilian and military organizations (joint, special operations, and multinational) that operate within their unit's area of operations. They consider relationships among

specified, implied, and essential tasks, and between them and available assets. From this analysis, staffs determine if they have the assets needed to complete all tasks. If shortages occur, they identify additional resources needed for mission success to the higher headquarters. Staffs also identify any deviations from the normal task organization and provide them to the commander to consider when developing the planning guidance. A more detailed analysis of available assets occurs during COA development.

Determine Constraints

9-38. The commander and staff identify any constraints placed on their command. **A *constraint* is a restriction placed on the command by a higher command. A constraint dictates an action or inaction, thus restricting the freedom of action of a subordinate commander.** Constraints are found in paragraph 3 of the OPLAN or OPORD. Annexes to the order may also include constraints. The operation overlay, for example, may contain a restrictive fire line or a no fire area. Constraints may also be issued verbally, in WARNORDs, or in policy memoranda.

9-39. Constraints may also be based on resource limitations within the command, such as organic fuel transport capacity, or physical characteristics of the operational environment, such as the number of vehicles that can cross a bridge in a specified time.

9-40. The commander and staff should coordinate with the staff judge advocate for a legal review of perceived or obvious constraints, restraints, or limitations in the OPLAN, OPORD, or related documents.

Identify Critical Facts and Develop Assumptions

9-41. Plans and orders are based on facts and assumptions. Commanders and staffs gather facts and develop assumptions as they build their plan. A fact is a statement of truth or a statement thought to be true at the time. Facts concerning the operational and mission variables serve as the basis for developing situational understanding, for continued planning, and when assessing progress during preparation and execution.

9-42. An assumption is a supposition on the current situation or a presupposition on the future course of events, either or both assumed to be true in the absence of positive proof, necessary to enable the commander in the process of planning to complete an estimate of the situation and make a decision on the course of action. In the absence of facts, the commander and staff consider assumptions from their higher headquarters. They then develop their own assumptions necessary for continued planning.

9-43. Having assumptions requires commanders and staffs to continually attempt to replace those assumptions with facts. The commander and staff should list and review the key assumptions on which fundamental judgments rest throughout the MDMP. Rechecking assumptions is valuable at any time during the operations process prior to rendering judgments and making decisions.

Begin Risk Management

9-44. *Risk management* is the process of identifying, assessing, and controlling risks arising from operational factors and making decisions that balance risk cost with mission benefits (JP 3-0). During mission analysis, the commander and staff focus on identifying and assessing hazards. Developing specific control measures to mitigate those hazards occurs during course of action development.

9-45. The chief of protection (or operations staff officer [S-3] in units without a protection cell) in coordination with the safety officer integrates risk management into the MDMP. All staff sections integrate risk management for hazards within their functional areas. Units conduct the first four steps of risk management in the MDMP. ATP 5-19 addresses the details for conducting risk management, including products of each step.

Develop Initial Commander's Critical Information Requirements and Essential Elements of Friendly Information

9-46. The mission analysis process identifies gaps in information required for further planning and decisionmaking during preparation and execution. During mission analysis, the staff develops information

requirements. Some information requirements are of such importance to the commander that staffs nominate them to the commander to become a commander's critical information requirement (CCIR).

9-47. A commander's critical information requirement is an information requirement identified by the commander as being critical to facilitating timely decisionmaking. The two key elements are friendly force information requirements and priority intelligence requirements. A CCIR directly influences decisionmaking and facilitates the successful execution of military operations. A CCIR is—

- Specified by a commander for a specific operation.
- Applicable only to the commander who specifies it.
- Situation dependent—directly linked to a current or future mission.
- Time-sensitive.

9-48. Commanders consider staff input when determining their CCIRs. CCIRs are situation-dependent and specified by the commander for each operation. Commanders continuously review CCIRs during the planning process and adjust them as situations change. The initial CCIRs developed during mission analysis normally focus on decisions the commander needs to make to focus planning. Once the commander selects a COA, the CCIRs shift to information the commander needs in order to make decisions during preparation and execution. Commanders designate CCIRs to inform the staff and subordinates what they deem essential for making decisions. Typically, commanders identify ten or fewer CCIRs; minimizing the number of CCIRs assists in prioritizing the allocation of limited resources. CCIR fall into one of two categories: PIRs and friendly force information requirements (FFIRs).

9-49. A PIR is an intelligence requirement, stated as a priority for intelligence support, that the commander and staff need to understand the adversary or the operational environment. PIRs identify the information about the enemy and other aspects of the operational environment that the commander considers most important. Lessons from recent operations show that intelligence about civil considerations may be as critical as intelligence about the enemy. Thus, all staff sections may recommend information about civil considerations as PIRs. The intelligence officer manages PIRs for the commander through planning requirements and assessing collection.

9-50. An FFIR is information the commander and staff need to understand the status of friendly force and supporting capabilities. FFIRs identify the information about the mission, troops and support available, and time available for friendly forces that the commander considers most important. In coordination with the staff, the operations officer manages FFIRs for the commander.

9-51. In addition to nominating CCIRs to the commander, the staff also identifies and nominates essential elements of friendly information (EEFIs). An EEFI establishes an element of information to protect rather than one to collect. EEFIs identify those elements of friendly force information that, if compromised, would jeopardize mission success. Although EEFIs are not CCIRs, they have the same priority as CCIRs and require approval by the commander. Like CCIRs, EEFIs change as an operation progresses.

9-52. Depending on the situation, the commander and selected staff members meet prior to the mission analysis brief to approve the initial CCIRs and EEFIs. This is especially important if the commander intends to conduct information collection early in the planning process. The approval of the initial CCIRs early during planning assists the staff in developing the initial information collection plan. Approval of an EEFI allows the staff to begin planning and implementing measures to protect friendly force information, such as military deception and operations security.

Develop the Initial Information Collection Plan

9-53. The initial information collection plan is crucial to begin or adjust the information collection effort to help answer information requirements necessary in developing effective plans. The initial information collection plan sets reconnaissance, surveillance, and intelligence operations in motion. It may be issued as part of a WARNORD, a fragmentary order (FRAGORD), or an OPORD. As more information becomes available, it is incorporated into a complete information collection plan (Annex L) to the OPORD.

9-54. The intelligence staff creates the requirements management tools for the information collection plan. The operations staff is responsible for the information collection plan. During this step, the operations and

intelligence staff work closely to ensure they fully synchronize and integrate information collection activities into the overall plan.

9-55. The operations officer considers several factors when developing the initial information collection plan, including:

- Requirements for collection assets in subsequent missions.
- The time available to develop and refine the initial information collection plan.
- The risk the commander is willing to accept if information collection missions are begun before the information collection plan is fully integrated into the scheme of maneuver.
- Insertion and extraction methods for reconnaissance, security, surveillance, and intelligence collection assets.
- Contingencies for inclement weather to ensure coverage of key named areas of interest or target areas of interest.
- The communications plan for transmission of reports from assets to command posts.
- The inclusion of collection asset locations and movements into the fire support plan.
- The reconnaissance handover with higher or subordinate echelons.
- The sustainment support.
- Legal support requirements.

FM 3-55 contains additional information on information collection, planning requirements, and assessing collection.

Update Plan for the Use of Available Time

9-56. As more information becomes available, the commander and staff refine their initial plan for the use of available time. They compare the time needed to accomplish tasks to the higher headquarters' timeline to ensure mission accomplishment is possible in the allotted time. They compare the timeline to the assumed enemy timeline with how they anticipate conditions will unfold. From this, they determine windows of opportunity for exploitation, times when the unit will be at risk for enemy activity, or when action to arrest deterioration in the local civilian population may be required.

9-57. The commander and COS (XO) also refine the staff planning timeline. The refined timeline includes the—

- Subject, time, and location of briefings the commander requires.
- Times of collaborative planning sessions and the medium over which they will take place.
- Times, locations, and forms of rehearsals.

Develop Initial Themes and Messages

9-58. Gaining and maintaining the trust of key actors is an important aspect of operations. Faced with the many different actors (individuals, organizations, and the public) connected with the operation, commanders identify and engage those actors who matter to operational success. These actors' behaviors can help solve or complicate the friendly forces' challenges as commanders strive to accomplish missions.

9-59. Themes and messages support operations and military actions. Commanders and their units coordinate what they do, say, and portray through themes and messages. A theme is a unifying or dominant idea or image that expresses the purpose for military action. Themes tie to objectives, lines of effort, and end state conditions. They are overarching and apply to capabilities of public affairs, military information support operations, and Soldier and leader engagements. A message is a verbal, written, or electronic communication that supports a theme focused on a specific actor or the public and in support of a specific action (task). Units transmit themes and messages to those actors or the public whose perceptions, attitudes, beliefs, and behaviors matter to the success of an operation.

9-60. The public affairs officer adjusts and refines themes and messages received from higher headquarters for use by the command. These themes and messages are designed to inform specific domestic and foreign audiences about current or planned military operations. The military information support operations element receives approved themes and messages. This element adjusts or refines depending on the situation. It employs themes and messages as part of planned activities designed to influence specific

foreign audiences for various purposes that support current or planned operations. The commander and the chief of staff approve all themes and messages used to support operations. The information operations officer assists the G-3 (S-3) and the commander to de-conflict and synchronize the use of information-related capabilities used specifically to disseminate approved themes and messages during operations.

Develop a Proposed Problem Statement

9-61. A problem is an issue or obstacle that makes it difficult to achieve a desired goal or objective. The problem statement is the description of the primary issue or issues that may impede commanders from achieving their desired end states.

> ***Note:*** The commander, staff, and other partners develop the problem statement as part of Army design methodology. During mission analysis, the commander and staff review the problem statement and revise it as necessary based on the increased understanding of the situation. If Army design methodology activities do not precede mission analysis, then the commander and staff develop a problem statement prior to moving to Step 3—COA Development.

9-62. How the problem is formulated leads to particular solutions. It is important that commanders dedicate the time to identify the right problem to solve and describe it clearly in a problem statement. Ideally, the commander and staff meet to share their analysis of the situation. They talk with each other, synthesize the results of the current mission analysis, and determine the problem. If the commander is not available, the staff members talk among themselves.

9-63. As part of the discussion to help identify and understand the problem, the staff—

- Compares the current situation to the desired end state.
- Brainstorms and lists issues that impede the commander from achieving the desired end state.

9-64. Based on this analysis, the staff develops a proposed problem statement—a statement of the problem or set of problems to be solved—for the commander's approval.

Develop a Proposed Mission Statement

9-65. The COS (XO) or operations officer prepares a proposed mission statement for the unit based on the mission analysis. The commander receives and approves the unit's mission statement normally during the mission analysis brief. A *mission statement* is a short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why (JP 5-0). The five elements of a mission statement answer these questions:

- Who will execute the operation (unit or organization)?
- What is the unit's essential task (tactical mission task)?
- When will the operation begin (by time or event) or what is the duration of the operation?
- Where will the operation occur (area of operations, objective, grid coordinates)?
- Why will the force conduct the operations (for what purpose)?

> ***Example 1***. Not later than 220400 Aug 09 (**when**), 1st Brigade (**who**) secures ROUTE SOUTH DAKOTA (**what/task**) in AREA OF OPERATIONS JACKRABBIT (**where**) to enable the movement of humanitarian assistance materials (**why/purpose**).
>
> ***Example 2***. 1-505th Parachute Infantry Regiment (**who**) seizes (**what/task**) JACKSON INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AREA OF OPERATIONS SPARTAN (**why/purpose**).

9-66. The mission statement may have more than one essential task. The following example shows a mission statement for a phased operation with a different essential task for each phase.

Example. 1-509th Parachute Infantry Regiment (**who**) seizes (**what/task**) JACKSON INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AREA OF OPERATIONS SPARTAN (**why/purpose**). On order (**when**), secures (**what/task**) OBJECTIVE GOLD (**where**) to prevent the 2nd Pandor Guards Brigade from crossing the BLUE RIVER and disrupting operations in AREA OF OPERATIONS SPARTAN (**why/purpose**).

9-67. The *who, where*, and *when* of a mission statement are straightforward. The *what* and *why* are more challenging to write and can confuse subordinates if not stated clearly. The *what* is a *task* and is expressed in terms of action verbs. These tasks are measurable and can be grouped as "actions by friendly forces" or "effects on enemy forces." The *why* puts the task into context by describing the reason for performing it. The *why* provides the mission's purpose—the reason the unit is to perform the task. It is extremely important to mission command and mission orders.

9-68. Commanders should use tactical mission tasks or other doctrinally approved tasks contained in combined arms field manuals or mission training plans in mission statements. These tasks have specific military definitions that differ from standard dictionary definitions. A *tactical mission task* is a specific activity performed by a unit while executing a form of tactical operation or form of maneuver. It may be expressed as either an action by a friendly force or effects on an enemy force (ADRP 1-03). FM 3-90-1 describes each tactical task. FM 3-07 provides a list of primary stability tasks which military forces must be prepared to execute. Commanders and planners should carefully choose the task that best describes the commander's intent and planning guidance.

Present the Mission Analysis Briefing

9-69. The mission analysis briefing informs the commander of the results of the staff's analysis of the situation. It helps the commander understand, visualize, and describe the operation. Throughout the mission analysis briefing, the commander, staff, and other partners discuss the various facts and assumptions about the situation. Staff officers present a summary of their running estimates from their specific functional area and how their findings impact or are impacted by other areas. This helps the commander and staff as a whole to focus on the interrelationships among the mission variables and to develop a deeper understanding of the situation. The commander issues guidance to the staff for continued planning based on situational understanding gained from the mission analysis briefing.

9-70. Ideally, the commander holds several informal meetings with key staff members before the mission analysis briefing, including meetings to assist the commander in developing CCIRs, the mission statement, and themes and messages. These meetings enable commanders to issue guidance for activities (such as reconnaissance, surveillance, security, and intelligence operations) and develop their initial commander's intent and planning guidance.

9-71. A comprehensive mission analysis briefing helps the commander, staff, subordinates, and other partners develop a shared understanding of the requirements of the upcoming operation. Time permitting, the staff briefs the commander on its mission analysis using the following outline:

- Mission and commander's intent of the headquarters two echelons up.
- Mission, commander's intent, and concept of operations of the headquarters one echelon up.
- A proposed problem statement.
- A proposed mission statement.
- Review of the commander's initial guidance.
- Initial IPB products, including civil considerations that impact the conduct of operations.
- Specified, implied, and essential tasks.
- Pertinent facts and assumptions.
- Constraints.
- Forces available and resource shortfalls.
- Initial risk assessment.
- Proposed themes and messages.

- Proposed CCIRs and EEFIs.
- Initial information collection plan.
- Recommended timeline.
- Recommended collaborative planning sessions.
- Proposed evaluation criteria.

9-72. During the mission analysis briefing or shortly thereafter, commanders approve the mission statement and CCIRs. They then develop and issue their initial commander's intent and planning guidance.

Develop and Issue Initial Commander's Intent

9-73. The *commander's intent* is a clear and concise expression of the purpose of the operation and the desired military end state that supports mission command, provides focus to the staff, and helps subordinate and supporting commanders act to achieve the commander's desired results without further orders, even when the operation does not unfold as planned (JP 3-0). The initial commander's intent describes the purpose of the operation, initial key tasks, and the desired end state (See ADRP 5-0 for more details on commander's intent).

9-74. The higher commander's intent provides the basis for unity of effort throughout the force. Each commander's intent nests within the higher commander's intent. The commander's intent explains the broader purpose of the operation beyond that of the mission statement. This explanation allows subordinate commanders and Soldiers to gain insight into what is expected of them, what constraints apply, and most importantly, why the mission is being conducted.

9-75. Based on their situational understanding, commanders summarize their visualization in their initial commander's intent statement. The initial commander's intent links the operation's purpose with conditions that define the desired end state. Commanders may change their intent statement as planning progresses and more information becomes available. The commander's intent must be easy to remember and clearly understood by leaders two echelons lower in the chain of command. The shorter the commander's intent, the better it serves these purposes. Typically, the commander's intent statement is three to five sentences long and contains the purpose, key tasks, and end state.

Develop and Issue Initial Planning Guidance

9-76. Commanders provide planning guidance along with their initial commander's intent. Planning guidance conveys the essence of the commander's visualization. This guidance may be broad or detailed, depending on the situation. The initial planning guidance outlines an *operational approach*—a description of the broad actions the force must take to transform current conditions into those desired at end state (JP 5-0). The initial planning guidance outlines specific COAs the commander desires the staff to look at as well as rules out any COAs the commander will not accept. That clear guidance allows the staff to develop several COAs without wasting effort on things that the commander will not consider. It reflects how the commander sees the operation unfolding. It broadly describes when, where, and how the commander intends to employ combat power to accomplish the mission within the higher commander's intent.

9-77. Commanders use their experience and judgment to add depth and clarity to their planning guidance. They ensure staffs understand the broad outline of their visualization while allowing the latitude necessary to explore different options. This guidance provides the basis for a detailed concept of operations without dictating the specifics of the final plan. As with their intent, commanders may modify planning guidance based on staff and subordinate input and changing conditions.

9-78. Commanders issue planning guidance initially after mission analysis. They continue to consider additional guidance throughout the MDMP including, but not limited, to the following:

- Upon receipt of or in anticipation of a mission (initial planning guidance).
- Following mission analysis (planning guidance for COA development).
- Following COA development (revised planning guidance for COA improvements).
- COA approval (revised planning guidance to complete the plan).

9-79. Table 9-1 lists commander's planning guidance by warfighting function. This list is not intended to meet the needs of all situations nor be all-inclusive, and providing guidance by warfighting function is not the only method. Commanders tailor planning guidance to meet specific needs based on the situation rather than address each item. Each item does not always fit neatly in a particular warfighting function, as it may be shared by more than one warfighting function. For example, although rules of engagement fall under the protection warfighting function, each other warfighting function chief has a vested interest in gaining guidance on rules of engagement. (See table 9-1.)

Table 9-1. Examples of commander's planning guidance by warfighting function

Mission Command	Commander's critical information requirements Rules of engagement Command post positioning Commander's location Initial themes and messages Succession of command	Liaison officer guidance Planning and operational guidance timeline Type of order and rehearsal Communications guidance Civil affairs operations Cyber electromagnetic considerations
Intelligence	Information collection guidance Information gaps Most likely and most dangerous enemy courses of action Priority intelligence requirements Most critical terrain and weather factors	Most critical local environment and civil considerations Intelligence requests for information Intelligence focus during phased operations Desired enemy perception of friendly forces
Movement and Maneuver	Commander's intent Course of action development guidance Number of courses of action to consider or not consider Critical events Task organization Task and purpose of subordinate units Forms of maneuver Reserve composition, mission, priorities, and control measures	Security and counterreconnaissance Friendly decision points Branches and sequels Task and direct collection Military deception Risk to friendly forces Collateral damage or civilian casualties Any condition that affects achievement of end state Information operations
Fires	Synchronization and focus of fires with maneuver Priority of fires High priority targets Special munitions Target acquisition zones Observer plan Air and missile defense positioning High-value targets	Task and purpose of fires Scheme of fires Suppression of enemy air defenses Fire support coordination measures Attack guidance Branches and sequels No strike list Restricted target list
Protection	Protection priorities Priorities for survivability assets Terrain and weather factors Intelligence focus and limitations for security Acceptable risk Protected targets and areas	Vehicle and equipment safety or security constraints Environmental considerations Unexploded ordnance Operations security risk tolerance Rules of engagement Escalation of force and nonlethal weapons Counterintelligence
Sustainment	Sustainment priorities—manning, fueling, fixing, arming, moving the force, and sustaining Soldiers and systems Health system support Sustainment of detainee and resettlement operations	Construction and provision of facilities and installations Detainee movement Anticipated requirements of Classes III, IV, and V Controlled supply rates

◄ Develop Course of Action Evaluation Criteria

9-80. Evaluation criteria are standards the commander and staff will later use to measure the relative effectiveness and efficiency of one COA relative to other COAs. Developing these criteria during mission analysis helps to eliminate a source of bias prior to COA analysis and comparison. Evaluation criteria address factors that affect success and those that can cause failure. Criteria change from mission to mission and must be clearly defined and understood by all staff members before starting the war game to test the proposed COAs. Normally, the COS (XO) initially determines each proposed criterion with weights based on the assessment of its relative importance and the commander's guidance. Commanders adjust criteria selection and weighting according to their own experience and vision. Higher weights are assigned to more important criteria. The staff member responsible for a functional area ranks each COA using those criteria. The staff presents the proposed evaluation criteria to the commander at the mission analysis brief for approval.

Issue a Warning Order

9-81. Immediately after the commander gives the planning guidance, the staff sends subordinate and supporting units a WARNORD. (See appendix C for sample WARNORD.) It contains, at a minimum—

- The approved mission statement.
- The commander's intent.
- Changes to task organization.
- The unit area of operations (sketch, overlay, or some other description).
- CCIRs and EEFIs.
- Risk guidance.
- Priorities by warfighting functions.
- Military deception guidance.
- Essential stability tasks.
- Initial information collection plan.
- Specific priorities.
- Updated operational timeline.
- Movements.

STEP 3–COURSE OF ACTION DEVELOPMENT

9-82. A COA is a broad potential solution to an identified problem. The COA development step generates options for subsequent analysis and comparison that satisfy the commander's intent and planning guidance. During COA development, planners use the problem statement, mission statement, commander's intent, planning guidance, and various knowledge products developed during mission analysis. (See figure 9-4.)

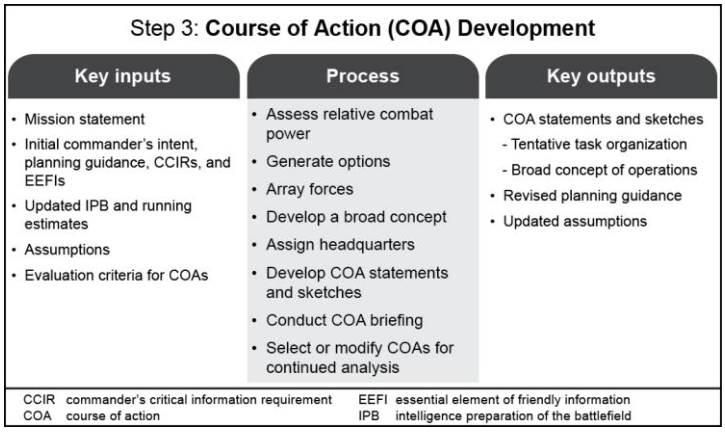

Figure 9-4. Step 3–course of action development

9-83. Embedded in COA development is the application of operational and tactical art. Planners develop different COAs by varying combinations of the elements of operational art, such as phasing, lines of effort, and tempo. (See ADRP 3-0 for more information on operational art.) Planners convert the approved COA into the concept of operations.

9-84. The commander's direct involvement in COA development greatly aids in producing comprehensive and flexible COAs within the time available. To save time, the commander may also limit the number of COAs staffs develop or specify particular COAs not to explore. Planners examine each prospective COA for validity using the following screening criteria:

- Feasible. The COA can accomplish the mission within the established time, space, and resource limitations.
- Acceptable. The COA must balance cost and risk with the advantage gained.
- Suitable. The COA can accomplish the mission within the commander's intent and planning guidance.
- Distinguishable. Each COA must differ significantly from the others (such as scheme of maneuver, lines of effort, phasing, use of the reserve, and task organization).
- Complete. A COA must incorporate—
  - How the decisive operation leads to mission accomplishment.
  - How shaping operations create and preserve conditions for success of the decisive operation or effort.
  - How sustaining operations enable shaping and decisive operations or efforts.
  - How to account for offensive, defensive, and stability or defense support of civil authorities tasks.
  - Tasks to be performed and conditions to be achieved.

9-85. It is important in COA development that commanders and staffs appreciate the unpredictable and uncertain nature of the operational environment, and understand how to cope with ambiguity. Some problems that commanders face are straightforward, as when clearly defined guidance is provided from higher headquarters, or when resources required for a mission are available and can easily be allocated. In such cases, the COA is often self-evident. However, for problems that are unfamiliar or ambiguous, Army design methodology may assist commanders in better understanding the nature of the problem, and afford both the commander and staff a level of comfort necessary to effectively advance through COA development. Commanders and staffs that are comfortable with ambiguity will often find that the Army design methodology provides flexibility in developing COAs that contain multiple options for dealing with changing circumstances. Staffs tend to focus on specific COAs for specific sets of circumstances, when it is usually best to focus on flexible COAs that provide the greatest options to account for the widest range of circumstances.

9-86. Commanders and staffs must be cautious not to attempt to identify and resolve every possible outcome to military operations. The interaction of multiple variables within an operational environment can lead to countless possible options and outcomes. Commanders and staffs should focus their efforts around known variables and analyze COAs that provide flexible options to the commander during execution. If commanders and staffs focus on what is known about a situation, it often becomes clear that the known information provides sufficient guidance to develop flexible COAs. It is important to clearly identify which variables the unit can control, which it does not control, and the implications of those that it does not control. Even when there are few facts available, it is often possible to reduce key issues to either an ability to do "X", or an inability to do "X" as a starting point. Such a reduction is preferred over trying to derive a wide range of possibilities. It is just as important not to see facts as constraining flexibility, but seek to use them to generate flexibility. Staffs work to confirm or deny facts before developing options. Staffs must also determine what risks are associated with various COAs.

9-87. As an example, a commander may know with reasonable certainty that an enemy force is positioned on the outskirts of a town. The commander may not be certain of the exact size of the enemy force, all the resources available to the enemy force, or actions the enemy may take over time. Such unknowns are a reality in an ambiguous operational environment. But, by focusing on the known information, that is, the position of the enemy at a point in time, the staff can develop COAs that provide maximum flexibility for

the commander. Known information can also apply to friendly actions, such as an established time for crossing a line of departure, or transition to a subsequent phase of an operation. COAs should allow for variances in timelines and resources as additional information on the enemy, as well as friendly forces, becomes available. Variances may also occur as changes in guidance from high headquarters arrives, or significant national policy decisions are made. Staffs identify risks associated with both friendly and enemy actions, as well as who is accepting the risk, and what resources should be allocated to mitigate the risks.

9-88. COA development should also identify decision points, the person responsible for making the decision, and what measures may be taken to provide the commander with additional time before making a decision. (See paragraph 9-127 for a discussion of decision points.) Good COAs provide commanders with options they can take based on anticipated and unanticipated changes in the situation. (See Chapter 14 for further discussion on decisionmaking in execution.) Staffs should highlight to the commander options that may be critical to mission success. Staffs should also identify points in time when options may no longer be viable, while working to keep options open to the commander as long as possible. In all cases, staffs provide commanders with options that are flexible, while clearly identifying risks associated with committing to options. Staffs also assess how possible options may impact on a commander's options at a higher echelon.

9-89. The unpredictable and uncertain nature of the operational environment should not in itself result in paralysis or hesitancy in military operations. By focusing COA development around information that is known to the staff, staffs can better steer their efforts toward developing COAs that provide maximum flexibility and viable options for the commander in the execution of military operations.

Assess Relative Combat Power

9-90. *Combat power* is the total means of destructive, constructive, and information capabilities that a military unit or formation can apply at a given time (ADRP 3-0). Combat power is the effect created by combining the elements of intelligence, movement and maneuver, fires, sustainment, protection, mission command, information, and leadership. The goal is to generate overwhelming combat power to accomplish the mission at minimal cost.

9-91. To assess relative combat power, planners initially make a rough estimate of force ratios of maneuver units two levels below their echelon. For example, at division level, planners compare all types of maneuver battalions with enemy maneuver battalion equivalents. Planners then compare friendly strengths against enemy weaknesses, and vice versa, for each element of combat power. From these comparisons, they may deduce particular vulnerabilities for each force that may be exploited or may need protection. These comparisons provide planners insight into effective force employment.

9-92. In troop-to-task analysis for stability and defense support of civil authorities, staffs determine relative combat power by comparing available resources to specified or implied stability or defense support of civil authorities tasks. This analysis provides insight as available options and needed resources. In such operations, the elements of sustainment, movement and maneuver, nonlethal effects, and information may dominate.

9-93. By analyzing force ratios and determining and comparing each force's strengths and weaknesses as a function of combat power, planners can gain insight into—

- Friendly capabilities that pertain to the operation.
- The types of operations possible from both friendly and enemy perspectives.
- How and where the enemy may be vulnerable.
- How and where friendly forces are vulnerable.
- Additional resources needed to execute the mission.
- How to allocate existing resources.

9-94. Planners must not develop and recommend COAs based solely on mathematical analysis of force ratios. Although the process uses some numerical relationships, the estimate is largely subjective. Assessing combat power requires assessing both tangible and intangible factors, such as morale and levels of training. A relative combat power assessment identifies exploitable enemy weaknesses, identifies

unprotected friendly weaknesses, and determines the combat power necessary to conduct essential stability or defense support of civil authorities tasks.

Generate Options

9-95. Based on the commander's guidance and the initial results of the relative combat power assessment, the staff generates options. A good COA can defeat all feasible enemy COAs while accounting for essential stability tasks. In an unconstrained environment, planners aim to develop several possible COAs. Depending on available time, commanders may limit the options in the commander's guidance. Options focus on enemy COAs arranged in order of their probable adoption or on those stability tasks that are most essential to prevent the situation from deteriorating further.

9-96. Brainstorming can be used for generating options. It requires time, imagination, and creativity, but it produces the widest range of choices. The staff (and members of organizations outside the headquarters) remains unbiased and open-minded when developing proposed options.

9-97. In developing COAs, staff members determine the doctrinal requirements for each proposed operation, including doctrinal tasks for subordinate units. For example, a deliberate breach requires a breach force, a support force, and an assault force. Essential stability tasks require the ability to provide a level of civil security, civil control, and certain essential services. In addition, the staff considers the potential capabilities of attachments and other organizations and agencies outside military channels.

9-98. Army leaders are responsible for clearly articulating their visualization of operations in time, space, purpose, and resources in order to generate options. ADRP 3-0 describes in detail three established operational frameworks. Army leaders are not bound by any specific framework in organizing operations, but three operational frameworks, mentioned below, have proven valuable in the past. The higher headquarters will direct the specific framework or frameworks to be used by subordinate headquarters; the frameworks should be consistent throughout all echelons. The three operational frameworks are—

- Deep-close-security.
- Main and supporting effort.
- Decisive-shaping-sustaining.

9-99. For example, when generating options for a decisive-shaping-sustaining operation, the staff starts with the decisive operation identified in the commander's planning guidance. The staff checks that the decisive operation nests within the higher headquarters' concept of operations. The staff clarifies the decisive operation's purpose and considers ways to mass the effects (lethal and nonlethal) of overwhelming combat power to achieve it.

9-100. Next, the staff considers shaping operations. The staff establishes a purpose for each shaping operation tied to creating or preserving a condition for the decisive operation's success. Shaping operations may occur before, concurrently with, or after the decisive operation. A shaping operation may be designated as the main effort if executed before or after the decisive operation.

9-101. The staff then determines sustaining operations necessary to create and maintain the combat power required for the decisive operation and shaping operation. After developing the basic operational organization for a given COA, the staff then determines the essential tasks for each decisive, shaping, and sustaining operation.

9-102. Once staff members have explored possibilities for each COA, they examine each COA to determine if it satisfies the screening criteria stated in paragraph 9-81. In doing so, they change, add, or eliminate COAs as appropriate. During this process, staffs avoid focusing on the development of one good COA among several throwaway COAs.

Array Forces

9-103. After determining the decisive and shaping operations and their related tasks and purposes, planners determine the relative combat power required to accomplish each task. Often, planners use minimum historical planning ratios as a starting point. For example, historically, defenders have over a 50 percent probability of defeating an attacking force approximately three times their equivalent strength.

Therefore, as a starting point, commanders may defend on each avenue of approach with roughly a 1:3 force ratio. (See table 9-2.)

Table 9-2. Historical minimum planning ratios

Friendly Mission	*Position*	*Friendly : Enemy*
Delay		1:6
Defend	Prepared or fortified	1:3
Defend	Hasty	1:2.5
Attack	Prepared or fortified	3:1
Attack	Hasty	2.5:1
Counterattack	Flank	1:1

9-104. Planners determine whether these and other intangibles increase the relative combat power of the unit assigned the task to the point that it exceeds the historical planning ratio for that task. If it does not, planners determine how to reinforce the unit. Combat power comparisons are provisional at best. Arraying forces is tricky, inexact work, affected by factors that are difficult to gauge, such as impact of past engagements, quality of leaders, morale, maintenance of equipment, and time in position. Levels of electronic warfare support, fire support, close air support, civilian support, and many other factors also affect arraying forces.

9-105. In counterinsurgency operations, planners can develop force requirements by gauging troop density—the ratio of security forces (including host-nation military and police forces as well as foreign counterinsurgents) to inhabitants. Most density recommendations fall within a range of 20 to 25 counterinsurgents for every 1,000 residents in an area of operations. A ratio of twenty counterinsurgents per 1,000 residents is often considered the minimum troop density required for effective counterinsurgency operations; however, as with any fixed ratio, such calculations strongly depend on the situation. (See FM 3-24 for more information on counterinsurgency planning.)

9-106. Planners also determine relative combat power with regard to civilian requirements and conditions that require attention, and then they array forces and capabilities for stability tasks. For example, a COA may require a follow-on force to establish civil security, maintain civil control, and restore essential services in a densely populated urban area over an extended period. Planners conduct a troop-to-task analysis to determine the type of units and capabilities needed to accomplish these tasks.

9-107. Planners then proceed to initially array friendly forces starting with the decisive operation and continuing with all shaping and sustaining operations. Planners normally array ground forces two levels below their echelon. The initial array focuses on generic ground maneuver units without regard to specific type or task organization and then considers all appropriate intangible factors. For example, at corps level, planners array generic brigades. During this step, planners do not assign missions to specific units; they only consider which forces are necessary to accomplish their task. In this step, planners also array assets to accomplish essential stability tasks.

9-108. The initial array identifies the total number of units needed and identifies possible methods of dealing with the enemy and stability tasks. If the number arrayed is less than the number available, planners place additional units in a pool for use when they develop the initial concept of the operation. (See paragraph 9-106.) If the number of units arrayed exceeds the number available and the difference cannot be compensated for with intangible factors, the staff determines whether the COA is feasible. Ways to make up the shortfall include requesting additional resources, accepting risk in that portion of the area of operations, or executing tasks required for the COA sequentially rather than simultaneously. Commanders should also consider requirements to minimize and relieve civilian suffering. Establishing civil security and providing essential services such as medical care, water, food, and shelter are implied tasks for commanders during any combat operation. (See FM 3-07 for a full discussion on stability tasks.)

Develop a Broad Concept

9-109. In developing the broad concept of the operation, the commander describes how arrayed forces will accomplish the mission within the commander's intent. The broad concept concisely expresses the *how*

of the commander's visualization and will eventually provide the framework for the concept of operations and summarizes the contributions of all warfighting functions. The staff develops the initial concept of the operation for each COA expressed in both narrative and graphic forms. A sound COA is more than the arraying of forces. It presents an overall combined arms idea that will accomplish the mission. The initial concept of the operation includes, but is not limited to, the following:

- The purpose of the operation.
- A statement of where the commander will accept risk.
- Identification of critical friendly events and transitions between phases (if the operation is phased).
- Designation of the reserve, including its location and composition.
- Information collection activities.
- Essential stability tasks.
- Identification of maneuver options that may develop during an operation.
- Assignment of subordinate areas of operations.
- Scheme of fires.
- Themes, messages, and means of delivery.
- Military deception operations (on a need to know basis).
- Key control measures.
- Designate the operational framework for this operation: deep-close-security, main and supporting effort, or decisive-shaping-sustaining.
- Designation of the decisive operation, along with its task and purpose, linked to how it supports the higher headquarters' concept.

NOTE: For the purpose of this section, the decisive-shaping-sustaining operational framework is an example. Planners use the same process when analyzing the other two operational frameworks—deep-close-security and main and supporting effort—to develop initial concepts of the operation.

9-110. Planners select control measures, including graphics, to control subordinate units during an operation. These establish responsibilities and limits that prevent subordinate units' actions from impeding one another. These measures also foster coordination and cooperation between forces without unnecessarily restricting freedom of action. Good control measures foster decisionmaking and individual initiative. (See FM 3-90-1 for a discussion of control measures associated with offensive and defensive tasks. See ADRP 1-02 for doctrinally correct unit symbols, control measures, and rules for drawing control measures on overlays and maps.)

9-111. Planners may use both lines of operations and lines of effort to build their broad concept. Lines of operations portray the more traditional links among objectives, decisive points, and centers of gravity. A line of effort, however, helps planners link multiple tasks with goals, objectives, and end state conditions. Combining lines of operations with lines of effort allows planners to include nonmilitary activities in their broad concept. This combination helps commanders incorporate stability or defense support of civil authorities tasks that, when accomplished, help set end state conditions of an operation.

9-112. Based on the commander's planning guidance (informed by the Army design methodology concept if this preceded the MDMP), planners develop lines of effort by—

- Confirming end state conditions from the initial commander's intent and planning guidance.
- Determining and describing each line of effort.
- Identifying objectives (intermediate goals) and determining tasks along each line of effort.

9-113. During COA development, lines of effort are general and lack specifics, such as tasks to subordinate units associated to objectives along each line of effort. Units develop and refine lines of effort, including specific tasks to subordinate units, during war-gaming. (See ADRP 5-0 and FM 3-07 for examples of operations depicted along lines of effort.)

9-114. As planning progresses, commanders may modify lines of effort and add details while war-gaming. Operations with other instruments of national power support a broader, comprehensive approach to stability tasks. Each operation, however, differs. Commanders develop and modify lines of effort to focus operations on achieving an end state, even as the situation evolves.

Assign Headquarters

9-115. After determining the broad concept, planners create a task organization by assigning headquarters to groupings of forces. They consider the types of units to be assigned to a headquarters and the ability of that headquarters to control those units. Generally, a headquarters controls at least two subordinate maneuver units (but not more than five) for fast-paced offensive or defensive tasks. The number and type of units assigned to a headquarters for stability tasks vary based on factors of the mission variables: mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC). If planners need additional headquarters, they note the shortage and resolve it later. Task organization takes into account the entire operational organization. It also accounts for the special command requirements for operations, such as a passage of lines, or air assault.

Develop Course of Action Statements and Sketches

9-116. The G-3 (S-3) prepares a COA statement and supporting sketch for each COA. The COA statement clearly portrays how the unit will accomplish the mission. The COA statement briefly expresses how the unit will conduct the combined arms concept. The sketch provides a picture of the movement and maneuver aspects of the concept, including the positioning of forces. Together, the statement and sketch cover the *who* (generic task organization), *what* (tasks), *when*, *where*, and *why* (purpose) for each subordinate unit.

9-117. The COA sketch includes the array of generic forces and control measures, such as—

- The unit and subordinate unit boundaries.
- Unit movement formations (but not subordinate unit formations).
- The line of departure or line of contact and phase lines, if used.
- Information collection graphics.
- Ground and air axes of advance.
- Assembly areas, battle positions, strong points, engagement areas, and objectives.
- Obstacle control measures and tactical mission graphics.
- Fire support coordination and airspace coordinating measures.
- Main effort.
- Location of command posts and critical communications nodes.
- Known or templated enemy locations.
- Population concentrations.

9-118. Planners can include identifying features (such as cities, rivers, and roads) to help orient users. The sketch may be on any medium. What it portrays is more important than its form. (See figure 9-5 on page 9-24 for a sample COA sketch and COA statement for a brigade combat team using the operational framework of decisive-shaping-sustaining.)

◄ Conduct a Course of Action Briefing

9-119. After developing COAs, the staff briefs them to the commander. A collaborative session may facilitate subordinate planning. The COA briefing includes—

- An updated IPB (if there are significant changes).
- As many threat COAs as necessary (or specified by the commander). At a minimum the most likely and most dangerous threat COAs must be developed.
- The approved problem statement and mission statement.
- The commander's and higher commander's intents.
- COA statements and sketches, including lines of effort if used.

- The rationale for each COA, including—
  - Considerations that might affect enemy COAs.
  - Critical events for each COA.
  - Deductions resulting from the relative combat power analysis.
  - The reason units are arrayed as shown on the sketch. (See ADRP 1-02 for doctrine on COA sketches.)
  - The reason the staff used the selected control measures.
  - The impact on civilians.
  - How the COA accounts for minimum essential stability tasks.
  - New facts and new or updated assumptions.
  - Refined COA evaluation criteria.

Select or Modify Courses of Action for Continued Analysis

9-120. After the COA briefing, the commander selects or modifies those COAs for continued analysis. The commander also issues planning guidance. If commanders reject all COAs, the staff begins again. If commanders accept one or more of the COAs, staff members begin COA analysis. The commander may create a new COA by incorporating elements of one or more COAs developed by the staff. The staff then prepares to war-game this new COA. The staff incorporates those modifications and ensures all staff members understand the changed COA.

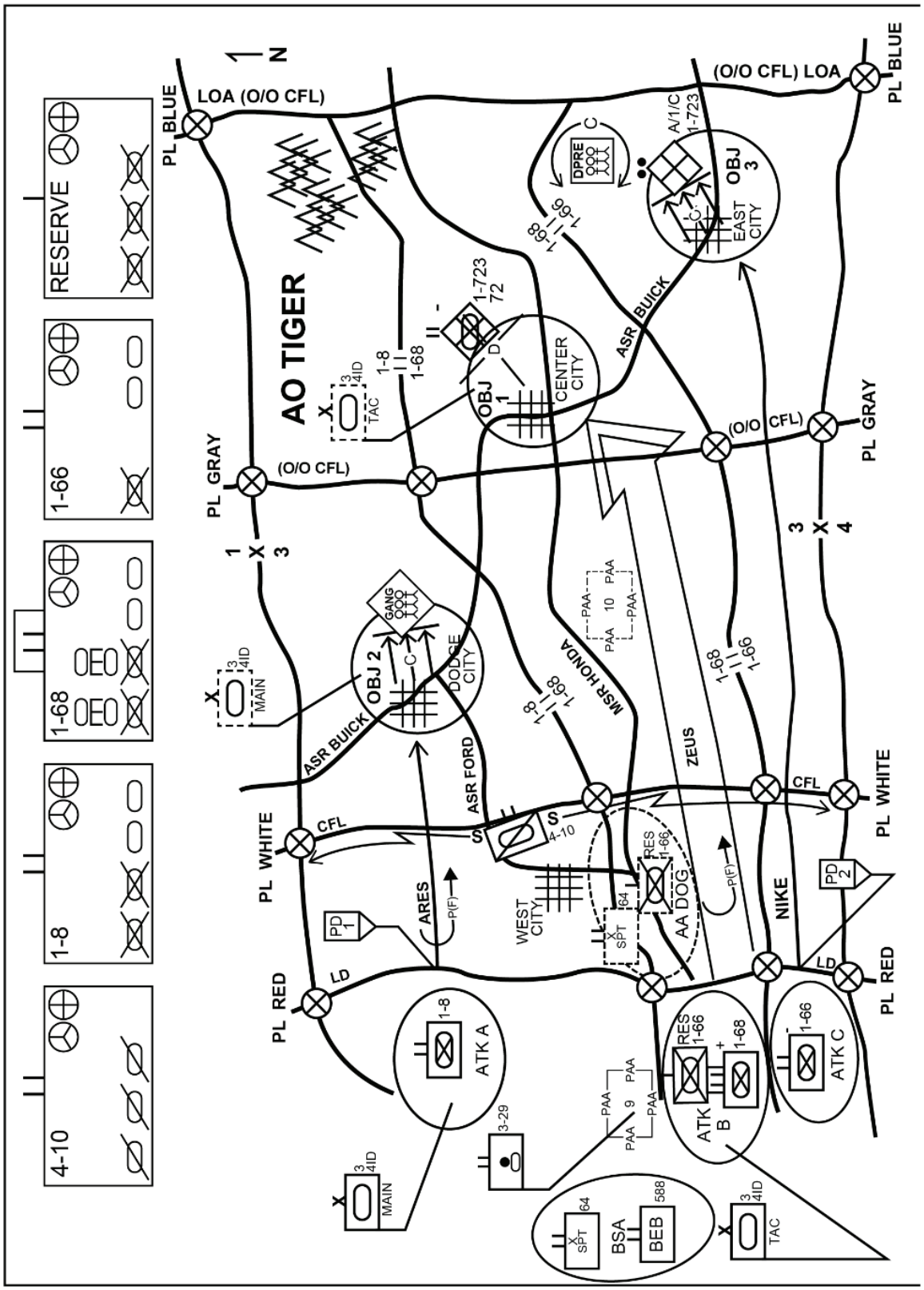

Figure 9-5. +Sample brigade course of action sketch

MISSION: On order, 3rd ABCT destroys remnants of the 72nd BDE in AO TIGER to establish security and enable the host-nation in reestablishing civil control in the region.

COMMANDER'S INTENT: The **purpose** of this operation is to provide a safe and secure environment in AO TIGER to enable the host-nation and other civilian organizations to reestablish civil control, restore essential services, and reestablish local governance within the area. The **key tasks** are: 1) destroy remnants of the 72nd BDE; 2) secure population centers vic OBJs 1, 2, and 3; 3) transition authority to the host nation. At **end state**, the BCT has destroyed remnant enemy forces in AO TIGER, secured population centers, and is prepared to transition responsibility for security to host nation authority.

INFORMATION COLLECTION: Priority of reconnaissance initially to locate enemy forces between PL RED (LD) and PL WHITE. Information collection operations subsequently focus on: 1) identifying the location and disposition of enemy forces vic OBJ 1; 2) observation of MSR HONDA between PL WHITE and PL BLUE; 3) observation of dislocated civilian traffic from CENTER CITY to EAST CITY.

SHAPING OPERATIONS:

4-10 CAV (ME) initially screens along PL WHITE IOT deny enemy reconnaissance and provide freedom of maneuver for follow on operations. On order, conducts FPOL at PL WHITE IOT move 1-8 CAB and 1-66 CAB(-) forward to conduct operations while maintaining contact with enemy.

O/O, **1-8 CAB** (SE) in the north moves from ATK A , crosses LD at PD1 on DIRECTION OF ATTACK ARES, conducts FPOL, and clears hostile gang vic OBJ 2 IOT enable NGO delivery of humanitarian assistance to WEST CITY and DODGE CITY.

TF 1-68 (SE) in the center occupies ATK B IOT prepare for follow on operations. On order, **1-66 CAB(-)** (SE) in the south moves from ATK C, crosses LD at PD 2, attacks along DIRECTION OF ATTACK NIKE, and clears enemy vic OBJ 3 IOT prevent disruption of DO vic OBJ 1.

588 BEB (SE) occupies BSA IOT set conditions for follow on operations.

RESERVE initially establishes vic ATK B. On order, displace to AA DOG (east). Priority of commitment to DO vic OBJ 1.

DECISIVE OPERATION:

4-10 CAV (SE) conducts FPOL vic PL WHITE IOT move 1-68 CAB (ME) forward to conduct operations while maintaining enemy contact. On order, occupy AA DOG (south) IOT prepare for future operations. BPT conduct security operations in northeastern portion of AO TIGER IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

1-8 CAB (SE) controls ASRs BUICK and FORD in assigned AO IOT facilitate sustaining operations and prevent civilians interference with DO vic OBJ 1.

O/O, **TF 1-68 (ME)** moves from ATK B along AXIS ZEUS, conducts FPOL, and attacks to destroy elements of 72nd BDE vic OBJ 1 IOT provide a secure environment for the CENTER CITY population. Bypass criteria is platoon-size or smaller.

1-66 CAB(-) (SE) controls DPRE camp vic EAST CITY IOT provide a secure environment and controls ASR BUICK in assigned AO IOT facilitate sustaining operations and prevent civilian interference with DO vic OBJ 1.

588 BEB (SE) conducts operations as required IOT support DO.

RESERVE establishes in AA DOG (east). Priority of commitment is to reinforce DO vic OBJ 1.

FIRES:

(Shaping Operations): Priority of fires to 4-10 CAV, 1-8 CAB, 1-66 CAB, and TF 1-68 initially from PAA 9. O/O displace to PAA 10. HPTs are enemy reconnaissance forces, indirect fire systems, and mechanized Infantry forces.

(Decisive Operations): Priority of fires to TF 1-68 (ME), 1-66 CAB, 1-8 CAB, and 4-10 CAV from PAA 10. HPTs are enemy armor, mechanized infantry forces, and indirect fire systems.

FSCM: CFL initially PL WHITE, O/O PL GRAY, O/O PL BLUE (LOA).

SUSTAINING OPERATIONS:

(Shaping Operations): 64 BSB will initially establish operations in BSA. O/O, establish BSA in AA DOG vic WEST CITY using MSR HONDA, ASR FORD, and ASR BUICK as primary routes IOT sustain operations. Establish FLEs as required to support operations. Priority of support to 4-10 CAV (ME) will be class III, V, maintenance, and medical.

(Decisive Operations): Priority of support to TF 1-68 (ME) will be class III, V, maintenance, and medical. Coordinate with humanitarian relief agencies IOT facilitate rapid restoration of essential services in AO TIGER.

MISSION COMMAND:

(Command): 3rd ABCT commander located with TAC CP and executive officer located with MAIN CP throughout mission.

(Control/Signal): 3rd ABCT **MAIN CP** initially located vic ATK A. O/O, displaces vic OBJ 2. 3rd ABCT **TAC CP** initially located vic ATK B. O/O, displaces vic OBJ 1.

RISK: Based on intelligence reports of negative enemy activity in the northeast mountainous portion of AO TIGER, risk is assumed with no ground maneuver forces initially allocated to conduct reconnaissance or surveillance operations. Mitigation will be accomplished by assigning a BPT mission to 4-10 CAV to conduct security operations IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

AA	assembly area	BSA	brigade support area	FSCM	fire support coordination measures	ME	main effort	SE	supporting effort
ABCT	armored brigade combat team	BSB	brigade support battalion			MSR	main supply route	SPT	support
AO	area of operations	CAB	combat aviation brigade	FLE	forward logistics element	NGO	nongovernmental organization	TAC	tactical
ASR	alternate supply route	CAV	cavalry	FPOL	forward passage of lines	O/O	on order	TF	task force
ATK	attack position	CFL	coordinated fire line	HPT	high payoff targets	OBJ	objective	vic	vicinity
BCT	brigade combat team	CP	command post	ID	infantry division	PAA	position area of artillery		
BDE	brigade	DO	decisive operations	IOT	in order to	PD	point of departure		
BEB	brigade engineer battalion	DPRE	displaced persons, refugees, and evacuees	LD	line of departure	PL	phase line		
BPT	be prepared to			LOA	limit of advance	RES	reserve		

Figure 9-5. Sample brigade course of action sketch (continued)

STEP 4–COURSE OF ACTION ANALYSIS AND WAR-GAMING

9-121. COA analysis enables commanders and staffs to identify difficulties or coordination problems as well as probable consequences of planned actions for each COA being considered. It helps them think through the tentative plan. COA analysis may require commanders and staffs to revisit parts of a COA as discrepancies arise. COA analysis not only appraises the quality of each COA, but it also uncovers potential execution problems, decisions, and contingencies. In addition, COA analysis influences how commanders and staffs understand a problem and may require the planning process to restart. (See figure 9-6.)

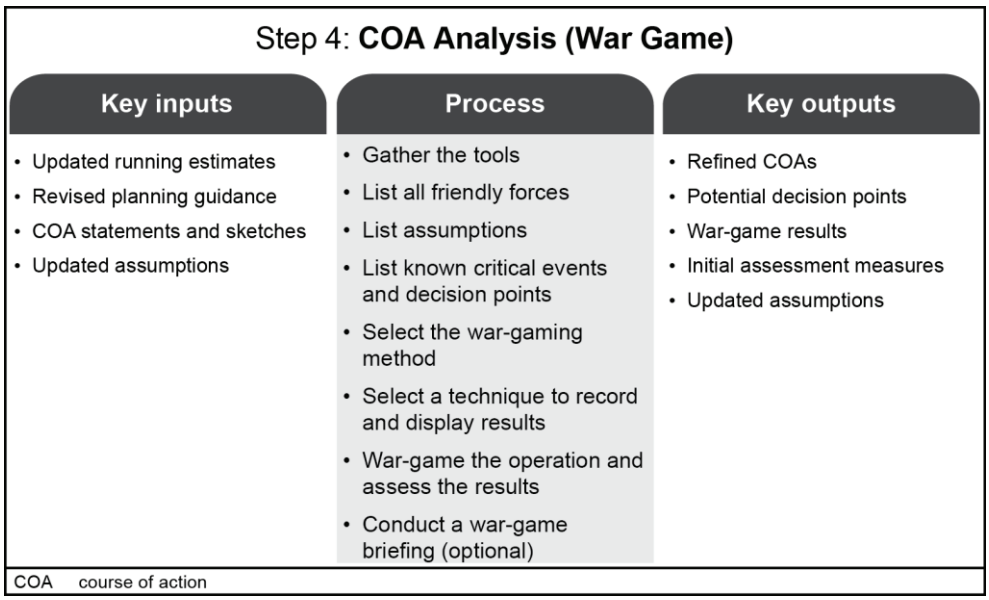

Figure 9-6. Step 4–course of action analysis and war-gaming

9-122. War-gaming is a disciplined process, with rules and steps that attempt to visualize the flow of the operation, given the force's strengths and dispositions, the enemy's capabilities, and possible COAs; the impact and requirements of civilians in the area of operations; and other aspects of the situation. The simplest form of war-gaming is the manual method, often using a tabletop approach with blowups of matrixes and templates. The most sophisticated form of war-gaming is computer-aided modeling and simulation. Regardless of the form used, each critical event within a proposed COA should be war-gamed using the action, reaction, and counteraction methods of friendly and enemy forces interaction. This basic war-gaming method (modified to fit the specific mission and environment) applies to offensive, defensive, and stability or defense support of civil authorities operations. When conducting COA analysis, commanders and staffs perform the process actions and produce the outputs shown in figure 9-6.

9-123. War-gaming results in refined COAs, a completed synchronization matrix, and decision support templates and matrixes for each COA. A synchronization matrix records the results of a war game. It depicts how friendly forces for a particular COA are synchronized in time, space, and purpose in relation to an enemy COA or other events in stability or defense support of civil authorities operations. The decision support template and matrix portray key decisions and potential actions that are likely to arise during the execution of each COA.

9-124. COA analysis allows the staff to synchronize the six warfighting functions for each COA. It also helps the commander and staff to—

- Determine how to maximize the effects of combat power while protecting friendly forces and minimizing collateral damage.
- Further develop a visualization of the operation.
- Anticipate operational events.

- Determine conditions and resources required for success.
- Determine when and where to apply force capabilities.
- Identify coordination needed to produce synchronized results.
- Determine the most flexible COA.

9-125. During the war game, the staff takes each COA and begins to develop a detailed plan while determining its strengths or weaknesses. War-gaming tests and improves COAs. The commander, staff, and other available partners (and subordinate commanders and staffs if the war game is conducted collaboratively) may change an existing COA or develop a new COA after identifying unforeseen events, tasks, requirements, or problems.

Gather the Tools

9-126. The first task for COA analysis is to gather the necessary tools to conduct the war game. The COS (XO) directs the staff to gather tools, materials, and data for the war game. Units war-game with maps, sand tables, computer simulations, or other tools that accurately reflect the terrain. The staff posts the COA on a map displaying the area of operations. Tools required include, but are not limited to—

- Running estimates.
- Threat templates and models.
- Civil considerations overlays, databases, and data files.
- Modified combined obstacle overlays and terrain effects matrices.
- A recording method.
- Completed COAs, including graphics.
- A means to post or display enemy and friendly unit symbols and other organizations.
- A map of the area of operations.

List All Friendly Forces

9-127. The commander and staff consider all units that can be committed to the operation, paying special attention to support relationships and constraints. This list includes assets from all participants operating in the area of operations. The friendly forces list remains constant for all COAs.

List Assumptions

9-128. The commander and staff review previous assumptions for continued validity and necessity. Any changes resulting from this review are noted for record.

List Known Critical Events and Decision Points

9-129. **A *critical event* is an event that directly influences mission accomplishment**. Critical events include events that trigger significant actions or decisions (such as commitment of an enemy reserve), complicated actions requiring detailed study (such as a passage of lines), and essential tasks. The list of critical events includes major events from the unit's current position through mission accomplishment. It includes reactions by civilians that potentially affect operations or require allocation of significant assets to account for essential stability tasks.

9-130. A *decision point* is a point in space and time when the commander or staff anticipates making a key decision concerning a specific course of action (JP 5-0). Decision points may be associated with the friendly force, the status of ongoing operations, and with CCIRs that describe what information the commander needs to make the anticipated decision. A decision point requires a decision by the commander. It does not dictate what the decision is, only that the commander must make one, and when and where it should be made to maximally impact friendly or enemy COAs or the accomplishment of stability tasks.

Select the War-Gaming Method

9-131. Three recommended war-gaming methods exist: belt, avenue-in-depth, and box. Each considers the area of interest and all enemy forces that can affect the outcome of the operation. Planners can use the methods separately or in combination and modified for long-term operations dominated by stability.

9-132. The belt method divides the area of operations into belts (areas) running the width of the area of operations. The shape of each belt is based on the factors of METT-TC. The belt method works best when conducting offensive and defensive tasks on terrain divided into well-defined cross-compartments, during phased operations (such as gap crossings, air assaults, or airborne operations), or when the enemy is deployed in clearly defined belts or echelons. Belts can be adjacent to or overlap each other.

9-133. This war-gaming method is based on a sequential analysis of events in each belt. Commanders prefer it because it focuses simultaneously on all forces affecting a particular event. A belt might include more than one critical event. Under time-constrained conditions, the commander can use a modified belt method. The modified belt method divides the area of operations into not more than three sequential belts. These belts are not necessarily adjacent or overlapping but focus on the critical actions throughout the depth of the area of operations. (See figure 9-7.)

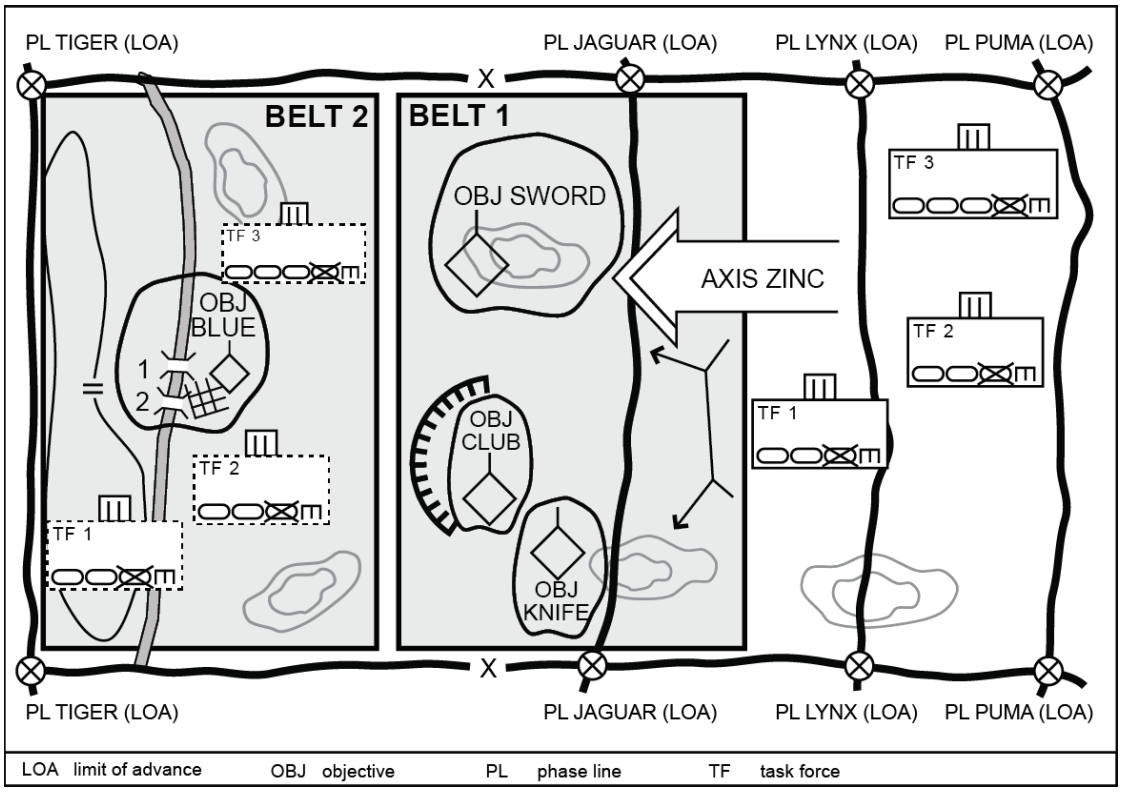

Figure 9-7. Sample belt method

9-134. In stability tasks, the belt method can divide the COA by events, objectives (goals not geographic locations), or events and objectives in a selected slice across all lines of effort. The belt method consists of war-gaming relationships among events or objectives on all lines of effort in the belt. (See figure 9-8 on page 9-29.)

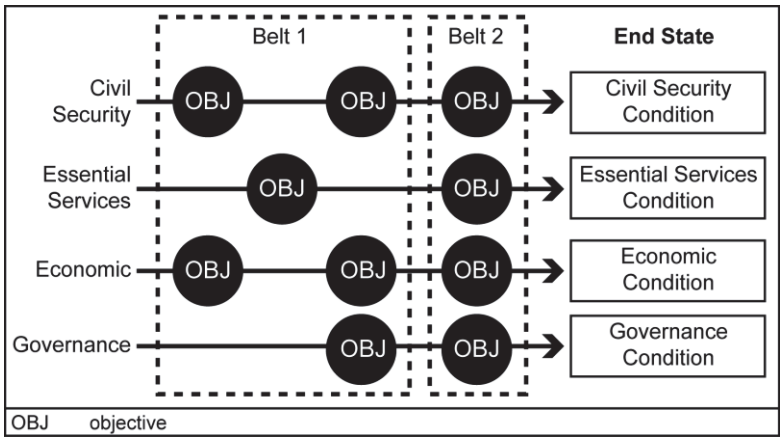

Figure 9-8. Sample modified belt method using lines of effort

9-135. The avenue-in-depth method focuses on one avenue of approach at a time, beginning with the decisive operation. This method is good for offensive COAs or in the defense when canalizing terrain inhibits mutual support. (See figure 9-9.)

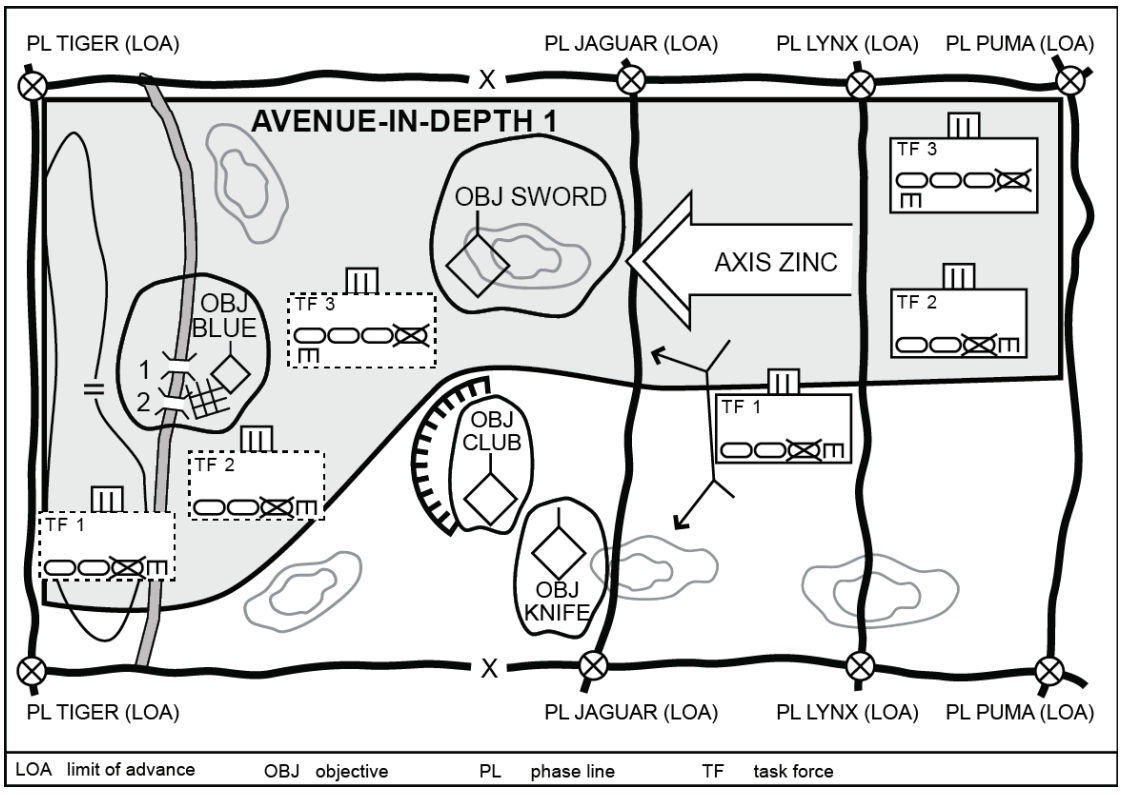

Figure 9-9. Sample avenue-in-depth method

9-136. In stability tasks, planners can modify the avenue-in-depth method. Instead of focusing on a geographic avenue, the staff war-games a line of effort. This method focuses on one line of effort at a time, beginning with the decisive line. The avenue-in-depth method includes not only war-gaming events and objectives in the selected line, but also war-gaming relationships among events or objectives on all lines of effort with respect to events in the selected line. (See figure 9-10 on page 9-30.)

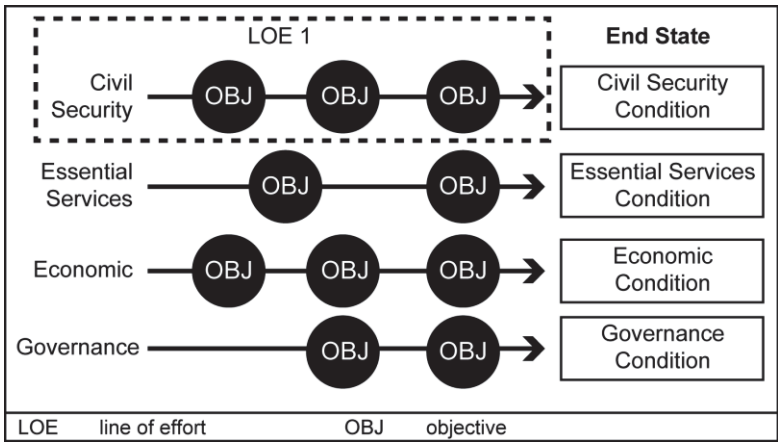

Figure 9-10. Sample modified avenue-in-depth method using lines of effort

9-137. The box method is a detailed analysis of a critical area, such as an engagement area, a wet gap crossing site, or a landing zone. It works best in a time-constrained environment, such as a hasty attack. The box method is particularly useful when planning operations in noncontiguous areas of operation. When using this method, the staff isolates the area and focuses on critical events in it. Staff members assume that friendly units can handle most situations in the area of operations and focus their attention on essential tasks. (See figure 9-11.)

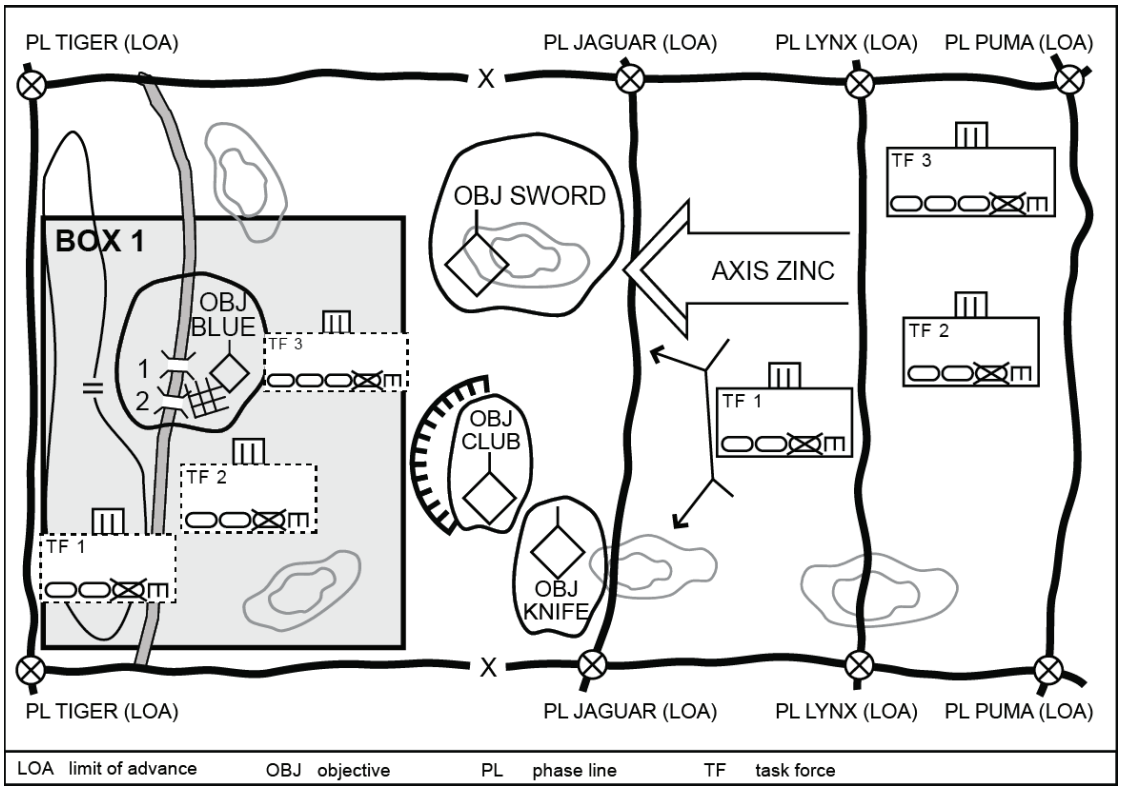

Figure 9-11. Sample box method

9-138. In stability tasks, the box method may focus analysis on a specific objective along a line of effort, such as development of local security forces as part of improving civil security. (See figure 9-12.)

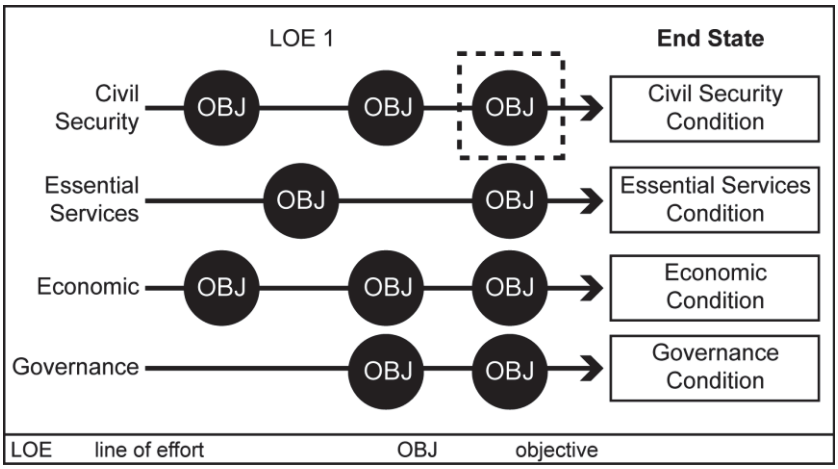

Figure 9-12. Sample modified box method using lines of effort

Select a Technique to Record and Display Results

9-139. The war-game results provide a record from which to build task organizations, synchronize activities, develop decision support templates, confirm and refine event templates, prepare plans or orders, and compare COAs. Two techniques are commonly used to record and display results: the synchronization matrix technique and the sketch note technique. In both techniques, staff members record any remarks regarding the strengths and weaknesses they discover. The amount of detail depends on the time available. Unit SOPs address details and methods of recording and displaying war-gaming results.

9-140. The synchronization matrix is a tool the staff uses to record the results of war-gaming that helps them synchronize a course of action across time, space, and purpose in relationship to potential enemy and civil actions. The first entry in the left column is the time, event, or phase of the operation. The second entry is the most likely enemy action. The third entry is the most likely civilian action. The fourth entry is the decision points for the friendly COA. The remainder of the matrix focuses on selected warfighting functions, their subordinate tasks, and the unit's major subordinate commands. (See table 9-3 on page 9-32.)

Table 9-3. Sample synchronization matrix tool

Time/Event/Phase		*H - 24 hours (or event or phase)*	*H-hour (or event or phase)*	*H + 24 (or event or phase)*
Enemy Action		Initiates threat activities and movements	Defends from security zone	Commits reserve
Population or Civilian Action		Orderly evacuation from area continues		
Decision Points		Conduct aviation attack of OBJ Irene		
Control Measures				
Movement and Maneuver	***1st ABCT***	Move on Route Irish	Cross LD	Seize on OBJ Irene
	2d ABCT	Move on Route Longstreet	Cross LD	Seize on OBJ Rose
	3d ABCT			FPOL with 1st BCT
	Avn Bde	Attack enemy reserve on OBJ Irene		
	BFSB			
Reserve				
Information Collection				
Fires		Prep fires initiated at H-5 Suppression of enemy air defense initiated		
Protection	***Engineer***			
	PMO			
	CBRN			
Sustainment				
Mission Command			Main CP with 1st BCT	
Close Air Support				
Electronic Warfare			Enemy command and control jammed	
Nonlethal Effects		Surrender broadcasts and leaflets		
Host Nation				
Interagency				
NGOs			Begins refugee relief	

Note: The first column is representative only and can be modified to fit formation needs.

AMD	air and missile defense	H	hour
Avn Bde	aviation brigade	LD	line of departure
ABCT	armored brigade combat team	NGO	nongovernmental organization
CBRN	chemical, biological, radiological, and nuclear	OBJ	objective
CP	command post	PMO	provost marshal office
FPOL	forward passage of lines		

9-141. The sketch note method uses brief notes concerning critical locations or tasks and purposes. These notes refer to specific locations or relate to general considerations covering broad areas. The commander and staff mark locations on the map and on a separate war-game work sheet. Staff members use sequential numbers to link the notes to the corresponding locations on the map or overlay. Staff members also identify actions by placing them in sequential action groups, giving each subtask a separate number. They use the war-game work sheet to identify all pertinent data for a critical event. (See table 9-4.) They assign each event a number and title and use the columns on the work sheet to identify and list in sequence—

- Units and assigned tasks.
- Expected enemy actions and reactions.
- Friendly counteractions and assets.
- Total assets needed for the task.
- Estimated time to accomplish the task.
- The decision point tied to executing the task.
- CCIRs.
- Control measures.
- Remarks.

Table 9-4. Sample sketch note method

Critical Event	*Seize OBJ Sword*
Sequence number	1
Action	TF 3 attacks to destroy enemy company on OBJ Sword
Reaction	Enemy company on OBJ Club counterattacks
Counteraction	TF 1 suppresses enemy company on OBJ Club
Assets	TF 3, TF 1, and TF2
Time	H+1 to H+4
Decision point	DP 3a and 3b
Commander's critical information requirements	Location of enemy armor reserve west of PL Jaguar
Control measures	Axis Zinc and support by fire position 1
Remarks	none

DP decision point PL phase line
OBJ objective TF task force

War-Game the Operation and Assess the Results

9-142. War-gaming is a conscious attempt to visualize the flow of operations given the friendly force's strengths and dispositions, the enemy's capabilities and possible COAs, and civilian locations and activities. During the war game, the commander and staff try to foresee the actions, reactions, and counteractions of all participants, including civilians. The staff analyzes each selected event. It identifies tasks that the force one echelon below it must accomplish, using assets two echelons below the staff. Identifying strengths and weaknesses of each COA allows the staff to adjust the COAs as necessary.

9-143. The war game focuses not so much on the tools used but on the people who participate. Staff members who participate in war-gaming should be the individuals deeply involved in developing COAs. Red team members (who can provide alternative points of view) provide insight on each COA. In stability tasks, subject matter experts in areas such as economic or local governance can also help assess the probable results of planned actions, including identifying possible unintended effects.

9-144. The war game follows an action-reaction-counteraction cycle. Actions are those events initiated by the side with the initiative. Reactions are the opposing side's actions in response. With regard to stability tasks, the war game tests the effects of actions, including intended and unintended effects, as they stimulate anticipated responses from civilians and civil institutions. Counteractions are the first side's responses to reactions. This sequence of action-reaction-counteraction continues until the critical event is completed or until the commander decides to use another COA to accomplish the mission.

9-145. The staff considers all possible forces, including templated enemy forces outside the area of operations, that can influence the operation. The staff also considers the actions of civilians in the area of operations, the diverse kinds of coverage of unfolding events, and their consequences in the global media.

The staff evaluates each friendly move to determine the assets and actions required to defeat the enemy at that point or to accomplish stability tasks. The staff continually considers branches to the plan that promote success against likely enemy counteractions or unexpected civilian reactions. Lastly, the staff lists assets used in the appropriate columns of the work sheet and lists the totals in the assets column (not considering any assets lower than two command levels below the staff).

9-146. The commander and staff examine many areas during the war game. These include, but are not limited to—

- All friendly capabilities.
- All enemy capabilities and critical civil considerations that impact operations.
- Global media responses to proposed actions.
- Movement considerations.
- Closure rates.
- Lengths of columns.
- Formation depths.
- Ranges and capabilities of weapon systems.
- Desired effects of fires.

9-147. The commander and staff consider how to create conditions for success, protect the force, and shape the operational environment. Experience, historical data, SOPs, and doctrinal literature provide much of the necessary information. During the war game, staff officers perform a risk assessment for their functional areas for each COA. They then propose appropriate control measures. They continually assess the risk of adverse reactions from population and media resulting from actions taken by all sides in the operation. Staff officers develop ways to mitigate those risks.

9-148. The staff continually assesses the risk to friendly forces, balancing between mass and dispersion. When assessing the risk of weapons of mass destruction to friendly forces, planners view the target that the force presents through the eyes of an enemy target analyst. They consider ways to reduce vulnerability and determine the appropriate level of mission-oriented protective posture consistent with mission accomplishment.

9-149. The staff identifies the required assets of the warfighting functions to support the concept of operations, including those needed to synchronize sustaining operations. If requirements exceed available assets, the staff recommends priorities based on the situation, commander's intent, and planning guidance. To maintain flexibility, the commander may decide to create a reserve to maintain assets for unforeseen tasks or opportunities.

9-150. The commander can modify any COA based on how things develop during the war game. When doing this, the commander validates the composition and location of the decisive operation, shaping operations, and reserve forces. Control measures are adjusted as necessary. The commander may also identify situations, opportunities, or additional critical events that require more analysis. The staff performs this analysis quickly and incorporates the results into the war-gaming record.

9-151. An effective war game results in the commander and staff refining, identifying, analyzing, developing, and determining several effects. (See table 9-5.)

Table 9-5. Effective war game results

The commander and staff refine (or modify)—
Each course of action, to include identifying branches and sequels that become on-order or be-prepared missions.
The locations and times of decisive points.
The enemy event template and matrix.
The task organization, including forces retained in general support.
Control requirements, including control measures and updated operational graphics.
Commander's critical information requirements and other information requirements—including the latest time information is of value—and incorporate them into the information collection plan.
The commander and staff identify—
Key or decisive terrain and determining how to use it.
Tasks the unit retains and tasks assigned to subordinates.
Likely times and areas for enemy use of weapons of mass destruction and friendly chemical, biological, radiological, and nuclear defense requirements.
Potential times or locations for committing the reserve.
The most dangerous enemy course of action.
The most likely enemy course of action.
The most dangerous civilian reaction.
Locations for the commander and command posts.
Critical events.
Requirements for support of each warfighting function.
Effects of friendly and enemy actions on civilians and infrastructure and on military operations.
Or confirming the locations of named areas of interest, target areas of interest, decision points, and intelligence requirements needed to support them.
Analyzing, and evaluating strengths and weaknesses of each course of action.
Hazards, assessing their risk, developing control measures for them, and determining residual risk.
The coordination required for integrating and synchronizing interagency, host-nation, and nongovernmental organization involvement.
The commander and staff analyze—
Potential civilian reactions to operations.
Potential media reaction to operations.
Potential impacts on civil security, civil control, and essential services in the area of operations.
The commander and staff develop—
Decision points.
A synchronization matrix.
A decision support template and matrix.
Solutions to achieving minimum essential stability tasks in the area of operations.
The information collection plan and graphics.
Themes and messages.
Fires, protection, and sustainment plans and graphic control measures.
The commander and staff determine—
The requirements for military deception and surprise.
The timing for concentrating forces and starting the attack or counterattack.
The movement times and tables for critical assets, including information systems nodes.
The estimated the duration of the entire operation and each critical event.
The projected the percentage of enemy forces defeated in each critical event and overall.
The percentage of minimum essential tasks that the unit can or must accomplish.
The media coverage and impact on key audiences.
The targeting requirements in the operation, to include identifying or confirming high-payoff targets and establishing attack guidance.
The allocation of assets to subordinate commanders to accomplish their missions.

Conduct a War-Game Briefing (Optional)

9-152. Time permitting, the staff delivers a briefing to all affected elements to ensure everyone understands the results of the war game. The staff uses the briefing for review and ensures that it captures all relevant points of the war game for presentation to the commander, COS (XO), or deputy or assistant commander. In a collaborative environment, the briefing may include selected subordinate staffs. A war-game briefing format includes the following:

- Higher headquarters' mission, commander's intent, and military deception plan.
- Updated IPB.
- Assumptions.
- Friendly and enemy COAs that were war-gamed, including—
  - Critical events.
  - Possible enemy actions and reactions.
  - Possible impact on civilians.
  - Possible media impacts.
  - Modifications to the COAs.
  - Strengths and weaknesses.
  - Results of the war game.
- War-gaming technique used.

General War-Gaming Rules and Responsibilities

9-153. War gamers need to—

- Remain objective, not allowing personality or their sense of "what the commander wants" to influence them.
- Avoid defending a COA just because they personally developed it.
- Record advantages and disadvantages of each COA accurately as they emerge.
- Continually assess feasibility, acceptability, and suitability of each COA. If a COA fails any of these tests, reject it.
- Avoid drawing premature conclusions and gathering facts to support such conclusions.
- Avoid comparing one COA with another during the war game. This occurs during Step 5—COA Comparison.

Mission Command Responsibilities

9-154. The commander has overall responsibility for the war-gaming process, and the commander can determine the staff members who are involved in war-gaming. Traditionally, certain staff members have key and specific roles.

9-155. The COS (XO) coordinates actions of the staff during the war game. This officer is the unbiased controller of the process, ensuring the staff stays on a timeline and achieves the goals of the war-gaming session. In a time-constrained environment, this officer ensures that, at a minimum, the decisive operation is war-gamed.

9-156. The G-3 (S-3) assists the commander with the rehearsal. The G-3 (S-3)—

- Portrays the friendly scheme of maneuver, including the employment of information-related capabilities.
- Ensures subordinate unit actions comply with the commander's intent.
- Normally provides the recorder.

9-157. The assistant chief of staff, signal (G-6 [S-6]) assesses network operations, spectrum management operations, network defense, and information protection feasibility of each war-gamed COA. The G-6 (S-6) determines communications systems requirements and compares them to available assets, identifies potential shortfalls, and recommends actions to eliminate or reduce their effects.

9-158. The information operations officer assesses the information operations concept of support against the ability of information-related capabilities to execute tasks in support of each war-gamed COA and the effectiveness of integrated information-related capabilities to impact various audiences and populations in and outside the area of operations. The information operations officer, in coordination with the electronic warfare officer, also integrates information operations with cyber electromagnetic activities.

9-159. The assistant chief of staff, civil affairs operations (G-9 [S-9]) ensures each war-gamed COA effectively integrates civil considerations (the "C" of METT-TC). The civil affairs operations officer considers not only tactical issues but also sustainment issues. This officer assesses how operations affect civilians and estimates the requirements for essential stability tasks commanders might have to undertake based on the ability of the unified action partners. Host-nation support and care of dislocated civilians are of particular concern. The civil affairs operations officer's analysis considers how operations affect public order and safety, the potential for disaster relief requirements, noncombatant evacuation operations, emergency services, and the protection of culturally significant sites. This officer provides feedback on how the culture in the area of operations affects each COA. If the unit lacks an assigned civil affairs officer, the commander assigns these responsibilities to another staff member.

9-160. The red team staff section provides the commander and assistant chief of staff, intelligence (G-2) with an independent capability to fully explore alternatives. The staff looks at plans, operations, concepts, organizations, and capabilities of the operational environment from the perspectives of enemies, unified action partners, and others.

9-161. The electronic warfare officer provides information on the electronic warfare target list, electronic attack taskings, electronic attack requests, and the electronic warfare portion of the collection matrix and the attack guidance matrix. Additionally, the electronic warfare officer assesses threat vulnerabilities, friendly electronic warfare capabilities, and friendly actions relative to electronic warfare activities and other cyber electromagnetic activities not covered by the G-6 or G-2.

9-162. The staff judge advocate advises the commander on all matters pertaining to law, policy, regulation, good order, and discipline for each war-gamed COA. This officer provides legal advice across the range of military operations on law of war, rules of engagement, international agreements, Geneva Conventions, treatment and disposition of noncombatants, and the legal aspects of targeting.

9-163. The operations research and systems analysis staff section provides analytic support to the commander for planning and assessment of operations. Specific responsibilities include—

- Providing quantitative analytic support, including regression and trend analysis, to planning and assessment activities.
- Assisting other staff members in developing customized analytical tools for specific requirements, providing a quality control capability, and conducting assessments to measure the effectiveness of operations.

9-164. The safety officer provides input to influence accident and incident reductions by implementing risk management procedures throughout the mission planning and execution process.

9-165. The knowledge management officer assesses the effectiveness of the knowledge management plan for each course of action.

9-166. The space operations officer provides and represents friendly, threat, and non-aligned space capabilities.

Intelligence Responsibilities

9-167. During the war game the G-2 (S-2) role-plays the enemy commander, other threat organizations in the area of operations, and critical civil considerations in the area of operations. This officer develops critical enemy decision points in relation to the friendly COAs, projects enemy reactions to friendly actions, and projects enemy losses. The intelligence officer assigns different responsibilities to available staff members within the section (such as the enemy commander, friendly intelligence officer, and enemy recorder) for war-gaming. The intelligence officer captures the results of each enemy, threat group, and civil considerations action and counteraction as well as the corresponding friendly and enemy strengths and vulnerabilities. By trying to realistically win the war game for the enemy, the intelligence officer ensures

that the staff fully addresses friendly responses for each enemy COA. For the friendly force, the intelligence officer—

- Refines intelligence and information requirements and the planning requirements tools.
- Refines the situation and event templates, including named areas of interest that support decision points.
- Refines the event template with corresponding decision points, target areas of interest, and high-value targets.
- Participates in targeting to select high-payoff targets from high-value targets identified during IPB.
- Recommends priority intelligence requirements that correspond to the decision points.
- Refines civil considerations overlays, databases, and data files.
- Refines the modified combined obstacle overlays and terrain effects matrices.
- Refines weather products that outline the critical weather impacts on operations.

Movemenent and Maneuver Responsibilities

9-168. During the war game, the G-3 (S-3) and assistant chief of staff, plans (G-5 [S-5]) are responsible for movement and maneuver. The G-3 (S-3) normally selects the technique for the war game and role-plays the friendly maneuver commander. Various staff officers assist the G-3 (S-3), such as the aviation officer and engineer officer. The G-3 (S-3) executes friendly maneuver as outlined in the COA sketch and COA statement. The G-5 (S-5) assesses warfighting function requirements, solutions, and concepts for each COA; develops plans and orders; and determines potential branches and sequels arising from various war-gamed COAs. The G-5 (S-5) also coordinates and synchronizes warfighting functions in all plans and orders. The planning staff ensures that the war game of each COA covers every operational aspect of the mission. The members of the staff record each event's strengths and weaknesses and the rationale for each action. They complete the decision support template and matrix for each COA. They annotate the rationale for actions during the war game and use it later with the commander's guidance to compare COAs.

Fires Responsibilities

9-169. The chief of fires (fire support officer) assesses the fire support feasibility of each war-gamed COA. This officer develops a proposed high-payoff target list, target selection standards, and attack guidance matrix. The chief of fires works with the intelligence officer to identify named and target areas of interest for enemy indirect fire weapon systems, and identifies high-payoff targets and additional events that may influence the positioning of field artillery and air defense artillery assets. The chief of fires should also offer a list of possible defended assets for air defense artillery forces and assist the commander in making a final determination about asset priority.

Protection Responsibilities

9-170. The chief of protection assesses protection element requirements, refines EEFIs, and develops a scheme of protection for each war-gamed COA. The chief of protection—

- Refines the critical asset list and the defended asset list.
- Assesses hazards.
- Develops risk control measures and mitigation measures of threats and hazards.
- Establishes personnel recovery coordination measures.
- Implements operational area security to include security of lines of communications, antiterrorism measures, and law enforcement operations.
- Ensures survivability measures reduce vulnerabilities.
- Refines chemical, biological, radiological, and nuclear operations.

Sustainment Responsibilities

9-171. During the war game, the assistant chief of staff, personnel (G-1 [S-1]) assesses the personnel aspect of building and maintaining the combat power of units. This officer identifies potential shortfalls and

recommends COAs to ensure units maintain adequate manning to accomplish their mission. As the primary staff officer assessing the human resources planning considerations to support sustainment operations, the G-1 (S-1) provides human resources support for the operation.

9-172. The assistant chief of staff, logistics (G-4 [S-4]) assesses the logistics feasibility of each war-gamed COA. This officer determines critical requirements for each logistics function (classes I through VII, IX, and X) and identifies potential problems and deficiencies. The G-4 (S-4) assesses the status of all logistics functions required to support the COA, including potential support required to provide essential services to the civilians, and compares it to available assets. This officer identifies potential shortfalls and recommends actions to eliminate or reduce their effects. While improvising can contribute to responsiveness, only accurately predicting requirements for each logistics function can ensure continuous sustainment. The logistics officer ensures that available movement times and assets support each COA.

9-173. During the war game, the assistant chief of staff, financial management (G-8) assesses the commander's area of operations to determine the best COA for use of resources. This assessment includes both core functions of financial management: resource management and finance operations. This officer determines partner relationships (joint, interagency, intergovernmental, and multinational), requirements for special funding, and support to the procurement process.

9-174. The surgeon section coordinates, monitors, and synchronizes the execution of the health system activities for the command for each war-gamed COA to ensure a fit and healthy force.

Recorders

9-175. The use of recorders is particularly important. Recorders capture coordinating instructions, subunit tasks and purposes, and information required to synchronize the operation. Recorders allow the staff to write part of the order before they complete the planning. Automated information systems enable recorders to enter information into preformatted forms that represent either briefing charts or appendixes to orders. Each staff section keeps formats available to facilitate networked orders production.

STEP 5–COURSE OF ACTION COMPARISON

9-176. COA comparison is an objective process to evaluate COAs independently and against set evaluation criteria approved by the commander and staff. The goal is to identify the strengths and weaknesses of COAs, enable selecting a COA with the highest probability of success, and further developing it in an OPLAN or OPORD. The commander and staff perform certain actions and processes that lead to key outputs. (See figure 9-13.)

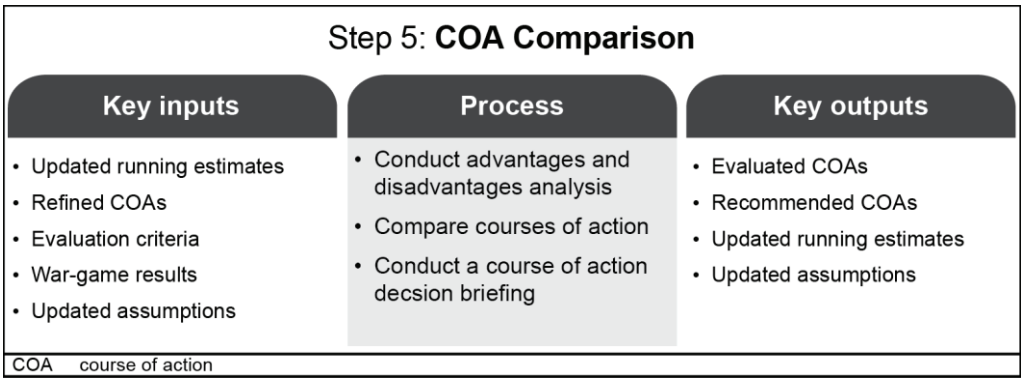

Figure 9-13. Step 5–course of action comparison

◄ Conduct Advantages and Disadvantages Analysis

9-177. The COA comparison starts with all staff members analyzing and evaluating the advantages and disadvantages of each COA from their perspectives. Staff members each present their findings for the others' consideration. Using the evaluation criteria developed during mission analysis and refined during

course of action development, the staff outlines each COA, highlighting its advantages and disadvantages. Comparing the strengths and weaknesses of the COAs identifies their advantages and disadvantages with respect to each other. (See table 9-6.)

Table 9-6. Sample advantages and disadvantages

Course of Action	*Advantages*	*Disadvantages*
Course of action 1	Decisive operation avoids major terrain obstacles. Adequate maneuver space available for units conducting the decisive operation and the reserve.	Units conducting the decisive operation face stronger resistance at the start of the operation. Limited resources available to establishing civil control to town X.
Course of action 2	Shaping operations provide excellent flank protection of the decisive operations. Upon completion of decisive operations, units conducting shaping operations can quickly transition to establish civil control and provide civil security to the population in town X.	Operation may require the early employment of the division's reserve.

◄ Compare Courses of Action

9-178. Comparison of COAs is critical. The staff uses any technique that helps develop those key outputs and recommendations and assists the commander to make the best decision. A common technique is the decision matrix. This matrix uses evaluation criteria developed during mission analysis and refined during COA development to help assess the effectiveness and efficiency of each COA. (See table 9-7.)

Table 9-7. Sample decision matrix

Weight[1]	1	2	1	1	2	
Criteria[2] **Course of Action**	Simplicity	Maneuver	Fires	Civil control	Mass	Total
COA 1[3]	2	2 (4)	2	1	1 (2)	8 (11)
COA 2[3]	1	1 (2)	1	2	2 (4)	7 (10)

Notes:
[1] The COS (XO) may emphasize one or more criteria by assigning weights to them based on a determination of their relative importance. Higher weights correspond to emphasized or more important criteria.
[2] Criteria are those approved by the commander during the mission analysis brief.
[3] COAs selected for war-gaming have rankings assigned with regards to each criteria based on relative advantages and disadvantages of each COA. For example, when compared for relative simplicity, COA 2 is simpler than COA 1 and is therefore ranked 1, with COA 1 ranked 2.

9-179. The decision matrix is a tool to compare and evaluate COAs thoroughly and logically. However, the process may be based on highly subjective judgments that can change dramatically during the course of evaluation. In table 9-7, the weights reflect the relative importance of each criterion as initially estimated by a COS (XO) during mission analysis and adjusted or approved by the commander. During COA comparison, rankings are assigned from 1 to however many COAs exist. Lower rankings are more preferred. After assigning ranks to COAs, the staff adds the unweighted ranks in each row horizontally and records the sum in the Total column on the far right of each COA. The staff then multiplies the same ranks by the weights associated with each criterion and notes the product in parenthesis underneath the unweighted rank. No notation is required if the weight is 1. The staff adds these weighted ranks horizontally and records the sum in parenthesis underneath the unweighted total in the Total column to the right of each COA. The staff then compares the totals to determine the most preferred (lowest total) COA

based on both unweighted and weighted ranks. Although the lowest total denotes a most preferred solution, the process for estimating relative COA ranks and relative criteria weighting may be highly subjective. Upon review and consideration, the commander—based on personal judgment—may accept the results of the decision matrix or elect to execute one of the other COAs.

9-180. Commanders and staffs cannot solely rely on the outcome of a decision matrix, as it only provides a partial basis for a solution. During the decision matrix process, planners carefully avoid reaching conclusions from a quantitative analysis of subjective weights. Comparing and evaluating COAs by each criterion is probably more useful than merely comparing totaled ranks. Judgments often change with regard to the relative weighting of criteria during close analysis of COAs, which will change weighted rank totals and possibly the most preferred COA.

9-181. The staff compares feasible COAs to identify the one with the highest probability of success against the most likely enemy COA, the most dangerous enemy COA, the most important stability task, or the most damaging environmental impact. The selected COA should also—

- Pose the minimum risk to the force and mission accomplishment.
- Place the force in the best posture for future operations.
- Provide maximum latitude for initiative by subordinates.
- Provide the most flexibility to meet unexpected threats and opportunities.
- Provide the most secure and stable environment for civilians in the area of operations.
- Best facilitate information themes and messages.

9-182. Staff officers often use their own matrix to compare COAs with respect to their functional areas. Matrixes use the evaluation criteria developed before the war game. Their greatest value is providing a method to compare COAs against criteria that, when met, produce operational success. Staff officers use these analytical tools to prepare recommendations. Commanders provide the solution by applying their judgment to staff recommendations and making a decision.

Conduct a Course of Action Decision Briefing

9-183. After completing its analysis and comparison, the staff identifies its preferred COA and makes a recommendation. If the staff cannot reach a decision, the COS (XO) decides which COA to recommend. The staff then delivers a decision briefing to the commander. The COS (XO) highlights any changes to each COA resulting from the war game. The decision briefing includes—

- The commander's intent of the higher and next higher commanders.
- The status of the force and its components.
- The current IPB.
- The COAs considered, including—
  - Assumptions used.
  - Results of running estimates.
  - A summary of the war game for each COA, including critical events, modifications to any COA, and war-game results.
  - Advantages and disadvantages (including risks) of each COA.
  - The recommended COA. If a significant disagreement exists, then the staff should inform the commander and, if necessary, discuss the disagreement.

STEP 6–COURSE OF ACTION APPROVAL

9-184. After the decision briefing, the commander selects the COA to best accomplish the mission. If the commander rejects all COAs, the staff starts COA development again. If the commander modifies a proposed COA or gives the staff an entirely different one, the staff war-games the new COA and presents the results to the commander with a recommendation. (See figure 9-14.)

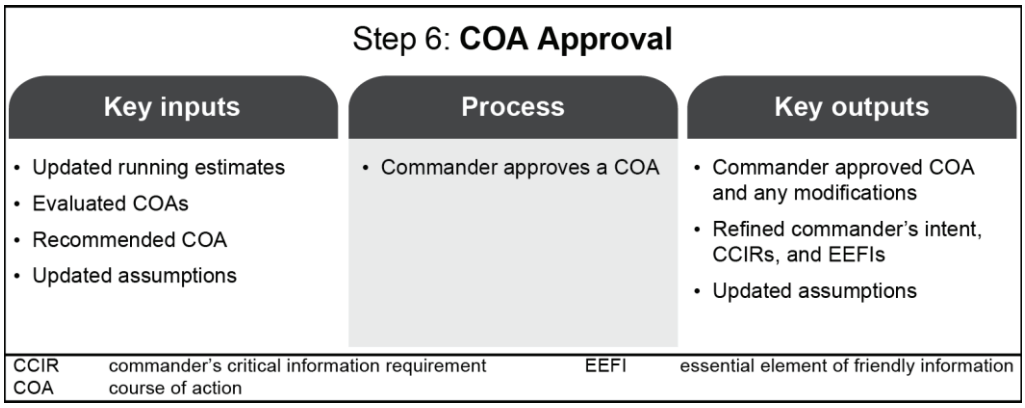

Figure 9-14. Step 6–course of action approval

9-185. After approving a COA, the commander issues the final planning guidance. The final planning guidance includes a refined commander's intent (if necessary) and new CCIRs to support execution. It also includes any additional guidance on priorities for the warfighting functions, orders preparation, rehearsal, and preparation. This guidance includes priorities for resources needed to preserve freedom of action and ensure continuous sustainment.

9-186. Commanders include the risk they are willing to accept in the final planning guidance. If there is time, commanders use a video teleconference to discuss acceptable risk with adjacent, subordinate, and senior commanders. However, commanders still obtain the higher commander's approval to accept any risk that might imperil accomplishing the higher commander's mission.

9-187. Based on the commander's decision and final planning guidance, the staff issues a WARNORD to subordinate headquarters. This WARNORD contains the information subordinate units need to refine their plans. It confirms guidance issued in person or by video teleconference and expands on details not covered by the commander personally. The WARNORD issued after COA approval normally contains—

- The area of operations.
- Mission.
- Commander's intent.
- Updated CCIRs and EEFIs.
- Concept of operations.
- Principal tasks assigned to subordinate units.
- Preparation and rehearsal instructions not included in the SOPs.
- A final timeline for the operations.

STEP 7–ORDERS PRODUCTION, DISSEMINATION, AND TRANSITION

9-188. The staff prepares the order or plan by turning the selected COA into a clear, concise concept of operations and the required supporting information. The COA statement becomes the concept of operations for the plan. The COA sketch becomes the basis for the operation overlay. If time permits, the staff may conduct a more detailed war game of the selected COA to more fully synchronize the operation and complete the plan. (See figure 9-15 on page 9-42.) The staff writes the OPORD or OPLAN using the Army's operation order format. (See appendix C.)

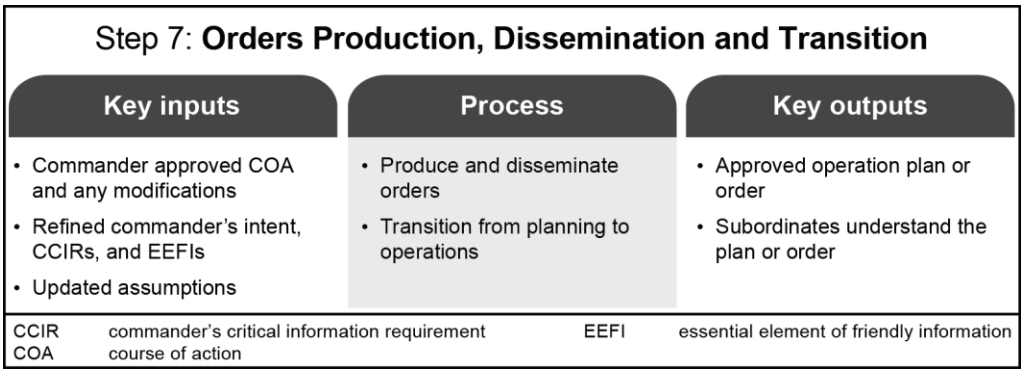

Figure 9-15. Step 7–orders production, dissemination, and transition

9-189. Normally, the COS (XO) coordinates with staff principals to assist the G-3 (S-3) in developing the plan or order. Based on the commander's planning guidance, the COS (XO) dictates the type of order, sets and enforces the time limits and development sequence, and determines which staff section publishes which attachments.

9-190. Prior to the commander approving the plan or order, the staff ensures the plan or order is internally consistent and is nested with the higher commander's intent. They do this through—

- Plans and orders reconciliation.
- Plans and orders crosswalk.

Plans and Orders Reconciliation

9-191. Plans and orders reconciliation occurs internally as the staff conducts a detailed review of the entire plan or order. This reconciliation ensures that the base plan or order and all attachments are complete and in agreement. It identifies discrepancies or gaps in planning. If staff members find discrepancies or gaps, they take corrective actions. Specifically, the staff compares the commander's intent, mission, and commander's CCIRs against the concept of operations and the different schemes of support (such as scheme of fires or scheme of sustainment). The staff ensures attachments are consistent with the information in the base plan or order.

Plans and Orders Crosswalk

9-192. During the plans and orders crosswalk, the staff compares the plan or order with that of the higher and adjacent commanders to achieve unity of effort and ensure the plan meets the superior commander's intent. The crosswalk identifies discrepancies or gaps in planning. If staff members find discrepancies or gaps, they take corrective action.

Approving the Plan or Order

9-193. The final action in plan and order development is the approval of the plan or order by the commander. Commanders normally do not sign attachments; however, they should review them before signing the base plan or order.

9-194. Step 7 bridges the transition between planning and preparations. The plans-to-operations transition is a preparation activity that occurs within the headquarters. It ensures members of the current operations cell fully understand the plan before execution. During preparation, the responsibility for developing and maintaining the plan shifts from the plans (or future operations) cell to the current operations cell. This transition is the point at which the current operations cell becomes responsible for controlling execution of the operation order. This responsibility includes answering requests for information concerning the order and maintaining the order through fragmentary orders. This transition enables the plans cell to focus its planning efforts on sequels, branches, and other planning requirements directed by the commander. (See

ADRP 5-0 for information on the plans to operations handover and chapter 12 of this manual for information on rehearsals.)

9-195. Commanders review and approve orders before the staff reproduces and disseminates them, unless commanders have delegated that authority. Subordinates immediately acknowledge receipt of the higher order. If possible, the higher commander and staff brief the order to subordinate commanders in person. The commander and staff conduct confirmation briefings with subordinates immediately afterwards. Confirmation briefings can be conducted collaboratively with several commanders at the same time or with single commanders. These briefings may be conducted in person or by video teleconference.

PLANNING IN A TIME-CONSTRAINED ENVIRONMENT

9-196. Any planning process aims to quickly develop a flexible, sound, and fully integrated and synchronized plan. However, any operation may "outrun" the initial plan. The most detailed estimates cannot anticipate every possible branch or sequel, enemy action, threat action, or reaction from the local population, unexpected opportunity, or change in mission directed from higher headquarters. Fleeting opportunities or unexpected enemy action may require a quick decision to implement a new or modified plan. When this occurs, units often find themselves pressed for time in developing a new plan.

9-197. Before a unit can effectively conduct planning in a time-constrained environment, it must master the steps in the full MDMP. A unit can only shorten the process if it fully understands the role of each and every step of the process and the requirements to produce the necessary products. Training on these steps must be thorough and result in a series of staff battle drills that can be tailored to the time available.

9-198. Quality staffs produce simple, flexible, and tactically sound plans in time-constrained environments. Any METT-TC factor, but especially limited time, may make it difficult to complete every step of the MDMP in detail. Applying an inflexible process to all situations does not work. Anticipation, organization, and prior preparation are the keys to successful planning under time-constrained conditions.

9-199. Staffs can use the time saved on any step of the MDMP to—

- Refine the plan more thoroughly.
- Conduct a more deliberate and detailed war game.
- Consider potential branches and sequels in detail.
- Focus more on rehearsing and preparing the plan.
- Allow subordinate units more planning and preparation time.

THE COMMANDER'S RESPONSIBILITY

9-200. The commander decides how to adjust the MDMP, giving specific guidance to the staff to focus on the process and save time. Commanders shorten the MDMP when they lack time to perform each step in detail. The most significant factor to consider is time. It is the only nonrenewable, and often the most critical, resource. Commanders (who have access to only a small portion of the staff or none at all) rely even more than normal on their own expertise, intuition, and creativity as well as on their understanding of the environment and of the art and science of war. They may have to select a COA, mentally war-game it, and confirm their decision to the staff in a short time. If so, they base their decision more on experience than on a formal, integrated staff process.

9-201. Effective commanders avoid changing their guidance unless a significantly changed situation requires major revisions. Making frequent, minor changes to the guidance can easily result in lost time as the staff constantly adjusts the plan with an adverse ripple effect throughout overall planning.

9-202. Commanders consult with subordinate commanders before making a decision, if possible. Subordinate commanders are closer to the operation and can more accurately describe enemy, friendly, and civilian situations. Additionally, consulting with subordinates gives commanders insights into the upcoming operation and allows parallel planning. White boards and collaborative digital means of communicating greatly enhance parallel planning.

9-203. In situations where commanders must decide quickly, they advise their higher headquarters of the selected COA, if time is available. However, commanders do not let an opportunity pass just because they cannot report their actions.

THE STAFF'S RESPONSIBILITY

9-204. Staff members keep their running estimates current. When time constraints exist, they can provide accurate, up-to-date assessments quickly and move directly into COA development. Under time-constrained conditions, commanders and staffs use as much of the previously analyzed information and as many of the previously created products as possible. The importance of running estimates increases as time decreases. Decisionmaking in a time-constrained environment usually occurs after a unit has entered the area of operations and begun operations. This means that the IPB, an updated common operational picture, and some portions of the running estimates should already exist. Civilian and military joint and multinational organizations operating in the area of operations should have well-developed plans and information to add insights to the operational environment. Detailed planning provides the basis for information that the commander and staff need to make decisions during execution.

TIME-SAVING TECHNIQUES

9-205. Paragraphs 9-206 through 9-210 discuss time-saving techniques to speed the planning process.

Increase Commander's Involvement

9-206. While commanders cannot spend all their time with their planning staffs, the greater the commander's involvement in planning, the faster the staff can plan. In time-constrained conditions, commanders who participate in the planning process can make decisions (such as COA selection) without waiting for a detailed briefing from the staff.

Limit the Number of Courses of Action to Develop

9-207. Limiting the number of COAs developed and war-gamed can save planning time. If time is extremely short, the commander can direct development of only one COA. In this case, the goal is an acceptable COA that meets mission requirements in the time available. This technique saves the most time. The fastest way to develop a plan has the commander directing development of one COA with branches against the most likely enemy COA or most damaging civil situation or condition. However, this technique should be used only when time is severely limited. In such cases, this choice of COA is often intuitive, relying on the commander's experience and judgment. The commander determines which staff officers are essential to assist in COA development. Normally commanders require the intelligence officer, operations officer, plans officer, chief of fires (fire support officer), engineer officer, civil affairs operations officer, information operations officer, military information support operations officer, electronic warfare officer, and COS (XO). They may also include subordinate commanders, if available, either in person or by video teleconference. This team quickly develops a flexible COA that it feels will accomplish the mission. The commander mentally war-games this COA and gives it to the staff to refine.

Maximize Parallel Planning

9-208. Although parallel planning is the norm, maximizing its use in time-constrained environments is critical. In a time-constrained environment, the importance of WARNORDs increases as available time decreases. A verbal WARNORD now, followed by a written order later, saves more time than a written order one hour from now. The staff issues the same WARNORDs used in the full MDMP when abbreviating the process. In addition to WARNORDs, units must share all available information with subordinates, especially IPB products, as early as possible. The staff uses every opportunity to perform parallel planning with the higher headquarters and to share information with subordinates.

Increase Collaborative Planning

9-209. Planning in real time with higher headquarters and subordinates improves the overall planning effort of the organization. Modern information systems and a common operational picture shared

electronically allow collaboration with subordinates from distant locations, can increase information sharing, and can improve the commander's visualization. Additionally, taking advantage of subordinates' input and knowledge of the situation in their areas of operations often results in developing better COAs quickly.

Use Liaison Officers

9-210. Liaison officers posted to higher headquarters and unified action partners' headquarters allow commanders to have representation in their higher headquarters' planning session. These officers assist in passing timely information to their parent headquarters and directly to the commander. Effective liaison officers have the commander's full confidence and the necessary rank and experience for the mission. Commanders may elect to use a single individual or a liaison team. As representatives, liaison officers must—

- Understand how their commander thinks and interpret verbal and written guidance.
- Convey their commander's intent, planning guidance, mission, and concept of operations.
- Represent their commander's position.
- Know the unit's mission; tactics, techniques, and procedures; organization; capabilities; and communications equipment.
- Observe the established channels of command and staff functions.
- Be trained in their functional responsibilities.
- Be tactful.
- Possess the necessary language expertise.

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